Aalto University
School of Business

THE ROLE AND CAPABILITIES OF THE BOARD OF DIRECTORS IN MANAGING DIGITALIZATION

A study among Finnish large and mid-sized companies

Master's Thesis
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Abstract of master's thesis

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Abstract

Over the last decade, researchers have discussed how digitalization significantly affects companies' business environment and competitiveness. Several studies have suggested that besides other organizational resources, a board of directors may play a key role when a company is trying to adapt to its changing competitive environment and a new strategic context. Furthermore, researchers have widely discussed boards' role in the new digital era and how traditional corporate governance no longer meets the needs of companies in rapidly-changing business environments.

The purpose of this thesis was to examine the role and capabilities of the board of directors in managing digitalization in Finnish large and mid-sized incumbent companies and to come up with suggestions on how Finnish boards could improve their contribution to their companies' success in the digital era. For this purpose, an anonymous online survey was conducted and sent to a large group of chairmen and board members from Finnish large and mid-sized companies. The results – combined with several international studies – suggest that in the new digital era, the traditional role of boards in monitoring financial results is no longer enough and there is an urgent need for the discussion about the role of the board of directors in managing digitalization and taking an active role in companies' strategy work.

Keywords board of directors, digitalization, management, large and mid-sized companies, digital strategy, strategy work

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Tiivistelmä

Kuluneen vuosikymmenen aikana tutkijat ovat käyneet keskustelua digitalisaation vaikutuksista yritysten liiketoimintaympäristöön ja kilpailukykyyn. Useat tutkimukset ovat esittäneet, että organisaation muiden kyvykkyyksien ohella yrityksen hallitus saattaa olla avainasemassa, kun yritys koettaa sopeutua muuttuvaan kilpailuympäristöön ja uuteen strategiseen kontekstiin. Tutkijat ovat keskustelleet laajalti hallitusten roolista uudella digitaalisella aikakaudella ja kuinka perinteinen hallitusten harjoittama corporate governance ei enää vastaa yritysten tarpeita nopeasti muuttuvassa liiketoimintaympäristössä.

Tämän tutkielman tarkoituksena oli selvittää suomalaisten suurten ja keskisuurten yritysten hallitusten roolia ja kyvykkyyksiä digitalisaation johtamisessa sekä esittää keinoja, joiden avulla hallitukset voivat parantaa panostaan edustamiensa yritysten menestykseen digitaalisella aikakaudella. Tätä tarkoitusta varten teetettiin anonyymi, sähköinen kysely, joka lähetettiin laajalle joukolle suomalaisten suurten ja keskisuurten yritysten hallitusten puheenjohtajia ja hallitusjäseniä. Tulokset – yhdistettynä useisiin kansainvälisiin tutkimuksiin – osoittivat, että uudella digitaalisella aikakaudella hallitusten perinteinen rooli taloudellisen tuloksen tarkastelijana ei enää riitä, ja että tarvitsemme kiireesti keskustelua hallitusten roolista osana digitalisaation johtamista ja yritysten strategiatyötä.

Avainsanat hallitus, digitalisaatio, johtaminen, Suomi, suuret ja keskisuuret yritykset, digistrategia, strategiatyö

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1 Introduction

For a long time, researchers have discussed how digitalization as an ongoing megatrend significantly affects our societies, organizations and businesses. The scope of the change has been widely recognized and the phenomenon has been often referred to as the “third industrial revolution”, or the “information age” (Brown & Marsden, 2013, as cited by Bankewitz et al. 2016). As the traditional rules of competition have been re-shaped, organizations’ ability to deal with the impact of digitalization may determine their future – in other words, whether they survive in the new competition or not.

At the same time, there has been a lot of discussion about not only companies’ digital maturity and competitiveness but also different countries’ digital competitiveness on a national level. Globally, Finland has been ranked among the 10 countries which are considered best prepared for the new digital economy, together with countries such as Singapore, Sweden and the USA. According to the World Economic Forum, our country has great access to the latest technologies and venture capital, and our companies are well-connected which improves our chances to succeed (Breene, 2016). While countries and governments may support digital development by, for example, writing laws that support development and growth or invest in research, it is important to understand the role of companies in building our country’s digital competitiveness. Without taking care of Finnish companies’ global competitiveness in the digital era, we will soon be left behind by countries that develop faster.

The board of directors as an organizational unit may play a key role in the company when it is trying to adapt to the changing competitive environment and a new strategic context. However, as many studies suggest, “the focus of boards worldwide has increasingly shifted to compliance rather than excellence”. As this thesis will present later on, researchers have widely discussed boards’ role in the new digital era and how the traditional corporate governance no longer meets the needs of companies in rapidly-changing business environments that are under continuous transformation. Ultimately, it has become suitable to ask if today's boards have understood the scope of the phenomenon as well as the challenges that it creates, and if are boards equipped to contribute organizations’ value creation in the future (Heidrick & Struggles, 2014).

Similar questions were raised by Finland Chamber of Commerce in their large survey that examined Finnish boards’ in 2017 and 2019. In both surveys, from the little bit over 1 100 respondents, two-thirds were CEOs and the rest were chairmen of the board and other board members. In the survey, the respondents were asked about their board's skills and expertise, and if their company's board currently has enough expertise for future challenges such as growth goals, internationalization and technological change. In 2017, only one-third (32 per cent) of the respondents answered that their board's expertise is on a sufficient level. (Linnainmaa & Tuominen, 2017). Two years later, the trend seems to be positive but still somewhat concerning as just over half (56%) of respondents in the survey said that their board currently has sufficient expertise in terms of future challenges of the company (Linnainmaa, 2019).

Even more interestingly, the chairmen and board members seemed more optimistic about their expertise than CEOs. In 2017, only 28 per cent of CEOs were satisfied with their board's current expertise regarding future challenges, while on the other hand, even 39 per cent of board members considered their expertise to be on a sufficient level. (Linnainmaa & Tuominen, 2017). In 2019 survey, there has been a significant improvement in this matter, although many board members and CEOs still saw considerable room for improvement in their board's expertise. From CEOs, only 53% consider the government to have sufficient expertise for the company's future challenges. From board members, 60 per cent considered their board to have sufficient expertise when thinking about the company's future challenges. Although the trend is positive, the results are still somewhat alarming and indicate a clear gap between boards and CEOs views on boards' expertise level.

Therefore, the purpose of this thesis is to explore how Finnish incumbent companies' boards actually see the future effect of digitalization on their businesses. Moreover, this thesis aims at examining what kind of role boards play in managing Finnish incumbents' digitalization and how they contribute to strategy in the digital era, as well as if Finnish boards possess the required capabilities in order to have a meaningful discussion with management about the opportunities and challenges created by digitalization.

1.1 The research questions

The role and capabilities of the board of directors in managing digitalization have been widely discussed among researchers and management specialists. However, so far the topic has not been studied among Finnish large and mid-sized incumbent companies. Therefore, this study aims at examining

- what digitalization represents for Finnish incumbents in terms of growth and challenges;
- how digitalization is positioned on the agenda of Finnish companies' boards;
- what is the role and contribution of the boards in managing digitalization; and
- do the boards have enough digital expertise and capabilities to manage digitalization and make strategic decisions related to it.

Therefore, the ultimate research question of this study is: what are the roles and capabilities of board of directors in managing digitalization in Finnish large and mid-sized companies and how could they contribute better to the companies' successful digitalization?

As the aims of this study, I try to find out and describe the current situation of Finnish companies in terms of managing digitalization from the boards. Furthermore, based on the survey results, the thesis aims at coming up with suggestions on how Finnish incumbents' boards could improve their contribution and capabilities in managing digitalization.

1.2 The structure of the thesis

This thesis consists of two main parts: the theory part (chapter 2) and the survey part (chapter 4). The theory part is then divided into three sections. The first section of the theory part explores the traditional role and contribution of boards to companies' strategy and success. Traditionally, boards in many companies across the world have had a compliance-related role and boards have mainly focused on measuring financial success and acting as "a rubber stamp" for strategy. However, in recent strategy literature, it has been increasingly argued that boards should start taking a more active role in companies' strategy work and leadership. The need for this change origins from the new type of challenges that are facing incumbent companies in the digital era. These challenges are discussed in the second section of the theory part. This section examines the challenges that incumbent firms are facing in today's fast-changing and increasingly digital business environment and aims at answering the question, why it is crucial for companies' survival that also boards re-think their role, capabilities and contribution. Finally, the last section of the theory part tries to answer the question, what needs to be changed in boards approaches and what could the new role of boards be like.

The theory part is followed by chapter 3 which focuses on the methods used in gathering data in the survey, including also evaluation of trustworthiness of the study. It is worth mentioning, for example, that the survey was carried out in a relatively short time period which, perhaps, limited the number of responses. Furthermore, the chapter discusses the sample and general information about the respondents in order to provide a reader with a good picture of who the respondents are and from which perspective they have been answering the survey.

Chapter 4 then explores the results and key findings of the survey which was divided into seven different sections. Each of the seven sections in the survey approaches the topic of the thesis from a different perspective, aiming at building a picture of the current situation in Finnish boards in incumbent companies. Respectively, the fourth chapter is divided into sections that not only explore the findings but also reflect the theory discussed in the second chapter.

After that, chapter 5 discusses the key findings in more detail and aims at drawing managerial implications. As the previous chapter mostly focused on reporting the results and exploring possible correlations in the quantitative results, this chapter focuses on analyzing the results from a more managerial perspective and tries to reflect the findings to the theory part. Furthermore, the limitations of the thesis as well as suggestions for further research are discussed in this chapter. Finally, chapter 6 summarizes the conclusions.

2 The theoretical background of the thesis

The literature review of this research includes three sections: the first two sections build a foundation to understand the role of the board of directors as well as the challenges brought by digitalization. Then, the third section aims to combine these points of views and examine how the role and competencies of boards should change as an incumbent company chooses digitalization as its path.

At first, the thesis examines the traditional perspective of how boards contribute to companies' success. This is the status quo that has been challenged during recent years by management literature and several studies. Besides examining boards' traditional role and contribution to companies' strategy work and success, the chapter also explores how boards are traditionally composed and if it has any link to companies' performance. The chapter also studies the way that boards and their performance are evaluated. Finally, the chapter ends up exploring studies that explain how the best performing boards contribute to strategy and success and what do these boards do differently in general.

The second chapter, 2.2 How digitalization challenges incumbent companies, examines the challenges that incumbent firms are facing in today's fast-changing and increasingly digital business environment. As the first chapter described the traditional role and contribution of boards, the second chapter aims at answering the question, why it is crucial for companies' survival that also boards re-think their role, capabilities and contribution. Besides exploring the different global challenges and opportunities, such as changing competition and the new rise of customer-centricity, the chapter also discussed the different ways that digitalization is taking place in incumbent companies. Finally, the chapter examines the different levels of digital maturity of incumbents, digitalization as a part of incumbents' business strategies as well as the importance of having a clear digital strategy.

Finally, the last chapter, 2.3 How managing digitalization challenges boards to change, tries to answer the question, what needs to be changed in boards approaches and what could their new role be like. The chapter also introduces theories of building dynamic boards and capabilities as well as new kind of IT governance in order to survive in competition.

2.1 Boards' traditional role and contribution to companies' strategy and success

In a fast-changing business environment, it has become increasingly relevant to understand how boards may contribute to organizational value creation as organizations are significantly reshaped (Bankewitz, 2016). After studying over 2,000 enterprises, Coulson-Thomas (2007) argues that much of the responsibility for success or stagnation as well as the wide gaps between potential and achievement lies in the hands of boards of directors.

Heidrick and Struggles (2014) have contributed strongly to the discussion of boards' role, composition and competencies in their European Corporate Governance Report. In order to examine the evolving role of the board of directors in leadership and driving business performance, Heidrick and Struggles (2014) collected data from 400 publicly listed companies from 15 European countries. In total, 236 senior board members were included. As the report of Heidrick and Struggles only focuses on European listed companies, there is a need to broaden the perspective; in order to study the state of board work globally, Felton and Fritz (2005) have conducted a survey with over 1,000 respondents from public companies around the world and studied the changing role of boards.

This section of the thesis relies strongly on the work of Heidrick and Struggles (2014) as well as the work of Coulson-Thomas (2007) as it tries to examine the link between boards' performance and companies' success, how the best-performing boards contribute to companies' strategy and success and how boards are traditionally composed.

Interestingly, as the following sections will suggest, the processes and ways that boards gather information, build knowledge and make decisions are found to be more important than the structure and composition of the board. However, before moving on to examine how the best-performing boards contribute companies' success, especially in the era of digitalization, we need to first understand the boards' traditional role in corporate governance and their key responsibilities and liabilities – which still build the foundation to the changing role of boards.

2.1.1 Board's traditional role and contribution

Board of directors has several responsibilities and liabilities based on the law and the principles of good corporate governance. In short, boards should fulfil two key functions in their dual role: firstly, boards discuss with management about the strategic and operational direction of the company (an advisory role), and secondly, boards monitor company's performance and aim at reducing agency costs (an oversight role). (Larcker & Tayan, 2015b) The Principles of Corporate Governance of OECD describes boards' role as following: "The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders." (OECD, 2004).

Boards are presided over by a chairman whose responsibility is, for example, to set agenda, and schedule meetings. Depending on the context, boards may have several specific responsibilities and liabilities related to managing, for example, financial matter, but boards may also have a much more strategic role. To inform decisions, boards rely on materials prepared by management (Larcker & Tayan, 2015b) and Heidrick and Struggles (2014) argue that boards play a key role in linking strategy, communication and execution in the company.

As contributors to companies' strategy, boards may have different kinds of roles as well as multiple tasks and practices as they view, guide and accept corporate strategy – which is typically brought to them by the management. Traditionally, boards tend to focus on the advising and evaluating, rather than on initiating strategy. Besides the division of roles and tasks, part of the reason for this might be that directors often have a strong dependence on the CEO who, as an executive, typically has better information and knowledge about the business. However, it is also criticized that CEOs tend to focus too much on organizational factors and dismiss external factors, such as marketplace discontinuity, emerging competition and disruptive technology when presenting a strategy to the board. Here, boards have the opportunity and also responsibility to bring their knowledge to the table, challenge CEOs and pay attention and allocate board time on looking outward. (Townsend, 2007)

All boards are involved in some level in strategic decision-making. However, the level of involvement differs remarkably between companies. According to Kemp (2006), at the lowest level of involvement, the board understands the decision-making processes, and the board's role is to monitor and act reactively, rather than take charge. At the second level of involvement, the board is typically involved in the strategy work and shaping strategic decisions in an early stage. The board may also provide management with a consultation. At this level, board members are enabled to get involved by, for example, testing ideas, raising issues or offering encouragement. At the deepest level of involvement, the board is involved continuously from the beginning in shaping the content, context and conduct of strategy. The board may also develop the context for strategic debate and establish a methodology for continuous strategic development. (Kemp, 2006) Interestingly, according to Heidrick and Struggles, 19% of the senior board member was not satisfied with their board's ability to have a clear and shared strategic vision. Respectively, 85% of UK board members are not able to identify how their organisation is differentiated from competitors or identify the company's competitive advantage. Only around 30% of directors say they have a full understanding of the company's current strategy. (Heidrick & Struggles, 2014)

2.1.2 The board composition and its link to performance

As the later sections will suggest, the traditional ways of board composition and renewal should be re-thought in order to build boards that are able to manage digitalization. Managing the composition of the board is a crucial task of chairmen as they should have to continually challenge the existing competence pool of boards. In order to be able to identify the possible practices that need to be changed, we should first understand how boards are traditionally composed and renewed.

The traditional issues of board composition are related to, for example, the size and diversity of the board but also to the ratio of executive and non-executive board members. However, instead suggesting best practices applicable in any situation, empirical studies of boards emphasize the relevance of companies' contextual factors and the importance of considering the internal and external environment when making decisions about board's size and diversity, proportion of executive and non-executive directors and strategic focus (Chambers et al., 2013).

Several studies have suggested that the size of the board could be linked to the performance of the company. Already in 1996, Yermack (as cited by Garner et al., 2018) examined hundreds of large companies in the US and found out that small board size was related to higher profitability and better operational efficiency. Also, Merendino and Melville (2018) found some evidence that board size has a positive effect on firm performance for lower levels of board size but negative when the board's size was bigger. Similar suggestions were made by Jensen (1993; as cited by Garner et al., 2017) who noticed how various studies found a correlation between the board size and the effectiveness of a board, suggesting that smaller boards were able to improve firm value. This was due to the fact that small boards were, for example, more effective in monitoring

CEOs, while bigger boards might be giving too much control to the CEO. Merendino and Melville (2018) also suggested that when deciding about the size of a board, it should be taken into consideration that the higher the number of board members, the higher is the probability of these persons having other commitments outside of the company, which would then decrease their commitment. According to Heidrick and Struggles (2014), Finland has the lowest average on the size of the board (7.5) while the European average is 12.1 directors.

In the common two-tier system, “board” refers to the “supervisory board” while “key executives” refers to the management board (OECD, 2004) and there has been a lot of discussion about having executives as board members. An executive director is a person who holds another position in a company, such as CEO, while non-executive directors have been appointed from outside of the company. While executives are believed to provide with better insights of the company (Garner et al., 2018), most studies emphasize the importance of having enough non-executives, also called outside directors, on boards (Ameer et al., 2010; Merendino & Melville, 2018). According to Ameer et al. (2010), boards with a high representation of non-executive directors are associated with better performance compared to boards with a majority of executives. Moreover, according to Merendino and Melville (2018), non-executives have a crucial role in ensuring that the interest of the company’s shareholders is protected, and they seem to be able to provide more unbiased judgment and advice (Garner et al., 2018). One of the boards crucial tasks is to set performance objectives and monitor corporate performance (Larcker & Tayan, 2015b). In this matter, non-executive directors are seen to be more vigilant than executive board members as they are more unlikely to dismiss, for example, the poor performance of the CEO. The importance of non-executive directors was emphasized also in the report of Heidrick & Struggles (2014) as they found out that in European companies, around 80% of board members are non-executives. In Finland, the proportion of non-executive directors is 88%. The role of non-executive directors is considered challenging as they may face criticism; instead of asking easy questions, non-executives are expected to challenge the view of executives in order to ensure deliberated decisions. Therefore, the role of a non-executive requires in-depth business knowledge in order to truly contribute and to offer valuable insights. (Heidrick & Struggles, 2014)

Besides the discussion about executives and non-executives on boards, there has been a lot of discussion about the dual role of CEO acting also as a chairman. In the study conducted by Heidrick and Struggles (2014), the proportion of Finnish boards where the

CEO had a dual role also as a chairman was 15% while the European average was 20%. These numbers are significantly lower than the US correspondent, as 53% of companies in the S&P 500 Index had a dual chairman/CEO in 2014. However, also in the US, the trend suggests separating these roles and the number of dual roles has come down from 2005 when the number was 71%. Despite the discussion suggesting separating these roles in order to a chair provide more watchful oversight of the organization, there is no research evidence generally supporting this idea as the influence of CEO duality on performance may vary depending on the context of a company. (Larcker & Tayan, 2015a; Merendino & Melville, 2018).

When the board is selecting new members, the board should choose practical and competent directors whose expertise and qualities complement and strengthen the existing board (Coulson-Thomas, 2007). According to Ameer et al. (2010), the survival of a company depends on its ability to deal with different sources of uncertainty or dependency. Thus, board members' individual capabilities to reduce uncertainties become relevant as well as evaluating their personal skills and assets. After all, each board member holds a unique set of human and social capital assets, such as educational background and work experience, the field of expertise, skills, networks and contacts. (Ameer et al., 2010)

Homogeneity of boards is increasingly seen as an issue and even small changes in the composition can make important differences. Academic research has constantly found evidence of the link between the diversity of boards and organizational performance. For example, Anderson et al. (2011; as cited by Garner et al., 2018) measured board diversity measuring six different attributes (including educational background, professional experience, experience in board work, age, gender, and ethnicity) and they found that board diversity was related to better financial performance. Also, in the survey of Heidrick and Struggles (2014), a total of 63% of senior board members rated a diverse gender and nationality mix being important for board effectiveness. Besides gender and ethnic diversity, boards should include a range of personalities, characters, skills and backgrounds in order to operate successfully (Heidrick & Struggles, 2014).

When it comes to the tenure of board members, it is easy to understand that some degree of consistency is required in the strategy work of boards. Moreover, Chambers et al. (2013) have suggested that especially the tenure of an outside director is positively related to the company's performance. This is due to the fact that accumulated learning and power effects of long tenure enable these outside directors to be more effective board members. However, the overall findings indicate that boards should try to retain their effective members, but not for an indefinite period, as the positive effects seem to diminish as tenure increases (Chambers et al., 2013). According to Heidrick and Struggles (2014), the average time that directors act as board members is 6 years in European companies while in Finland, the average number of years on the board is 4.9. Unlike in Europe, where the average number of years on boards seems to be increasing, in Finland, the number has decreased since 2009 when the average was 5.1 years. Also, in Finland, executive board members seem to stay in boards significantly less time (3.0 years) than non-executives who serve 5.2 years on average. (Heidrick & Struggles, 2014)

As boards aim to renew themselves and find new talent to contribute to their performance, succession planning and deciding about the required skills, knowledge and experience come in the picture. Ensuring a formal and transparent board nomination and election process is one of the key functions of a board. (Larcker & Tayan, 2015b) In general, diversity of thought enables the board to avoid group-think and to bring enough different perspectives to the table. Depending on the context, boards may also want to acquire certain expertise regarding, for example, finance, M&As or – in the era of digitalization – technology; if boards aim at reacting better to the events of the company's external environment, the composition of the board has to reflect that environment. In other words, the decisions about board members and succession plans need to be rooted in the company's business goals. Indeed, during the rapid changes in the competitive environment, the selection of the right people for the board has become increasingly critical, according to Heidrick and Struggles (2014). In their study, an impressive 92% agreed that talent performance and engagement in succession planning is important. However, only 55% rate their own board's performance satisfactory in this matter and only 62% considered their board having clear criteria for the replacement of board members. (Heidrick & Struggles, 2014)

Some of the boards' matters are delegated to subcommittees instead of deliberated by the full board. Depending on the issue at hand, these kinds of subcommittees may be standing or ad hoc. The most common types of committees are audit, compensation, nominating and governing committees but there can also be committees for e.g. finance, risk evaluation, environmental or technology matters. (Larcker & Tayan, 2015b) In Europe, the average is 3.4 committees per company, and audit, remuneration and nomination committees are the primary ones. However, European boards seem to be adding Strategy, Governance and Risk to their list of committees (Heidrick & Struggles, 2014).

Besides subcommittees, boards may rely on advisory boards that should not replace but complete and support the decision-making of boards by providing contacts or expert knowledge on a topic that the board has no expertise itself. According to Odgers Berndtson (n.d.), many organisations establish advisory boards to, for example, ensure getting the latest knowledge on emerging technology, or to gain insights about new markets. Advisory boards are not a substitute for statutory boards of directors, but they may be a valuable complement and strengthen the existing board and support its decision-making.

2.1.3 Evaluation of board performance

According to Heidrick and Struggles (2014), board performance evaluations have had a clear impact on board performance, especially on team dynamics, processes, culture, competencies and behaviour. This view was also supported by several other studies (see for example Conger et al., 1998; Long, 2006; Minichilli et al., 2007; as cited by Bezemer et al., 2014) which have proved the role and importance of regular boardroom evaluations in approving the effectiveness of boards of directors. However, the report of Heidrick and Struggles (2014) showed that even 30% of senior board members did not undertake annual performance evaluation while 16% said they never undertake an evaluation at all. 70% of companies had an annual performance evaluation for the board – in this matter, Finland, with 81% of companies undergoing board evaluation every year, was among the best-performing countries in the report examining European listed companies.

According to the report of Heidrick and Struggles (2014), the evaluation of the board and the CEO is typically a Chairman's responsibility while evaluating the Chairman is more likely to be the responsibility of other board members. As discussed earlier, there have been concerns about the possibility of biased judgements of executive board members which, in my opinion, supports the idea of using external professionals in evaluation. However, only 21% of boards undertaking annual evaluations hired external facilitators or consultants for evaluations. What comes to the evaluation methods, most of the evaluations were done using questionnaires (78%), open discussions (65%) and/or one-to-one interviews of directors (54%). (Heidrick & Struggles, 2014)

2.1.4 How the best performing boards contribute to strategy and success

As mentioned earlier, evaluating boards' "best" practices is a challenging task due to the various contextual factors such as industry and market. In a literature review on board of directors' effectiveness, Selim et al. (2009; as cited by Chambers et al., 2013) discovered that there was no single best practice to achieve an effective board that could apply in every situation. The reason for this was simply the fact that general principles had to be applied to the context, strategic focus and the stage of development of a particular organisation.

However, according to Coulson-Thomas (2007), there are significant differences in how boards act and how their members behave, and companies' performance seems to depend on how boards use their time. He states that instead of focusing on the traditional and formal governance considerations, the best-performing boards possess a different kind of commitment and behaviour. Also, the evidence from health-care industry in the review of Chambers et al. (2013) suggests that high-performing were, for example, better committed in their key governance processes and had clear structures and processes for the oversight of quality. Moreover, these well-performing boards allocated more time at board meetings to the specific matter and used regular dashboards to track performance. (Chambers et al., 2013) Respectively, Coulson-Thomas (2007) studied the reasons why some companies are significantly more effective than their competitors at their key activities and he found out that boards' most of the critical success factors could not be found, for example, in substance knowledge but in factors related to attitude, behaviour and different approaches.

First of all, as mentioned above, the commitment of board members to the board work plays an important role in a company's performance which was found out by Merendino and Melville (2018). According to Coulson-Thomas (2007), the best performing boards are committed to their companies and their actions demonstrate they care about the company's success. According to the National Association of Corporate Directors (as cited by Heidrick & Struggles, 2014), individual directors' working hours allocated to board service have grown significantly in recent years which may indicate a growing understanding of board members' role in leadership. When required, committed chairmen and directors are able to flexibly adapt their schedules and allocate time for board work.

The best-performing boards are also more willing to confront internal and external realities. According to Coulson-Thomas (2007), the members of winning boards assume personal and collective accountability and possess more self-awareness and objective criticism. They also monitor their own performance more openly and are more likely to learn from mistakes instead of rationalizing disappointment. In comparison with less successful boards, they encourage dialogue, invite questions and feedback and understand that challenging conversations are sometimes needed in order to get multiple perspectives. (Coulson-Thomas, 2007)

The best-performing boards also possess a better understanding of the company's business environment and marketplace and they are able to take a longer-term view and efforts to provide strategic leadership. According to Coulson-Thomas (2007), instead of focusing on the traditional aspects of corporate governance, winning boards are more likely to concentrate upon the external, strategic and business development issues. In other words, instead of rubber-stamping strategy and focusing solely on financial measures of performance and the control of costs, they aim to benefit shareholders by delivering customer value. As was discussed earlier, there are different levels of involvement in strategy work, and winning boards are the ones who seek to provide and communicate clear direction, a distinctive vision, achievable goals and clear objectives. (Coulson-Thomas, 2007).

Besides possessing a strategic vision, the best-performing boards also focus more on the existing and potential critical success factors of their companies. Studies suggest that one of the key elements of good corporate governance is to find the balance between the success factors that enable good performance today and the capability to compete and win in the future (Coulson-Thomas, 2001; as cited by Coulson-Thomas, 2007). As the balance between change and continuity are playing an important role in today's business, winners are more likely to strive to achieve this balance. Winning boards succeed better in leading transformation and creating future opportunities, but they are reported to be also more likely to develop additional income streams, new capabilities and fresh intellectual capital. (Coulson-Thomas, 2002; as cited by Coulson-Thomas, 2007). There is also a significant difference between the reactive and proactive board approach between the most successful and less successful companies. While the latter ones seem to be more preoccupied with reacting to the competitive moves of others and following trends, the best-performing boards are more likely adopt a proactive approach and seek new opportunities to create and deliver new kind of customer value. They are also more willing to explore and discover new possibilities with selected business partners. (Coulson-Thomas, 2007)

According to Coulson-Thomas (2007), one common trait of the directors of companies with a weak performance appears to be not having clear roles of directors, managers and shareholders, but also confusing operational and strategic issues. The relationship between the CEO and the chairman has been emphasized as the key to building an effective board. It is crucial that the CEO and the chairman share an aligned vision of how the company is – and how it should be – performing. Successful conversion of strategy to execution requires a number of vital elements: clarity, commitment, consistency, capability and constancy. (Heidrick & Struggles, 2014) According to Felton and Fritz (2005), the agreement on strategy between the CEO and the board was the most significant success factor. As emphasized earlier, the close collaboration of a CEO, a chairman and the board members enable continuous reflection, dialogue, and iteration and allows management to make meaningful use of directors' expertise and knowledge. (Townsend, 2007)

Finally, the best-performing boards are noticed to invest time and thought into managing the intellectual capabilities of a company. They encourage an entrepreneurial mindset and support and enable the achievements of employees. (Coulson-Thomas, 2007) Planning the flow of people who execute strategy is a crucial task which is recognized by successful companies. In order to succeed in engaging, exciting or motivating people, boards need to pay more attention to talent acquisition rather than only interviewing likely candidates (Heidrick & Struggles, 2014) According to Boris Groysberg from Harvard Business School (as cited by Heidrick & Struggles, 2014) "In the long run, the systematic development of stars is the most effective strategy to create a sustainable competitive advantage."

2.2 Digitalization and incumbents

As discussed earlier, digitalization is significantly affecting societies and organizations but at the same time, it provides both opportunities and threats for companies. According to Bankewitz et al. (2016), organizations' ability to deal with the impact of digitalization may determine whether or not they will remain competitive in the future. In business literature, the phenomenon of startups shaking up the competitive landscape has been noticed to create a remarkable threat for incumbent companies (Crittenden et al., 2019) who need to react to the changes in order to maintain or strengthen their competitive advantage.

This section examines how digitalization challenges incumbent companies in a new way and how their competitive environment changes at the same time with an increasing need for dynamic business models and customer-centricity. Furthermore, the chapter also examines the sources of industry-changing disruption, the objectives of incumbents as they begin their digitalization journey and how digitalization is embedded in incumbents' strategy as they choose to prevent themselves from being disrupted.

2.2.1 How digitalization challenges incumbent firms

A recent survey, including answers from 825 directors, CEOs, and senior executives from around the world, found that digital transformation risk is the respondents' biggest concern in 2019 (Sun, 2018) as digitalization has made companies' business environments more competitive than ever (Ansari & Riasi, 2016 as cited by Bankewitz, 2016). Digitalization is a much-discussed phenomenon, and it is expected to accelerate across all industries as business models, customer relationships and distribution channels are increasingly digitalized (Crittenden et al., 2019). Luckily, companies have started to realize the impact in their businesses: according to Bughin et al. (2018), only 8% of companies trust their current business model to maintain economic viability if their industry keeps digitizing at its current course and speed. Similarly, despite the product and technology orientation of Finnish large companies, the majority of their executives expect digitalization to transform the basic nature of all industries and enable the emergence of a new kind of competition (Lakaniemi, 2014). The challenges facing incumbent firms are inevitable.

Due to the current phenomenon, traditional strategic frameworks, such as Porter's five forces, which have served incumbents for decades, have now become outdated due to the rapid change of competitive environment (Bughin et al., 2018; Teixeira, 2019). The reason lies in the increasing need for customer-centricity in today's world: traditional frameworks tend to be firm-centric and focus only on companies, their competitors and distribution channels. However, the new wave of digital disruption is driven by customers, and it challenges incumbents to adopt new frameworks and tools that focus primarily on customers. Good examples of customer-driven disruption can be seen, for example, in the hotel and personal transportation industries as the new generations' preferences of digital services and desire for unique customer experiences have created space for new entrants as digital disruptors such as Airbnb and Uber. Digital technology has only been a tool for actualizing these new customer-centric business models. Once companies learn to look at markets from their customers' perspective, new possibilities for digital disruption opens up for incumbents. (Teixeira, 2019)

Crittenden et al. (2019) argue that incumbents can actually become pioneers of digitalization if they are able to integrate digitalization into their existing capabilities after identifying the ways in which digitalization occurs in interactions with their channels and customers. For incumbents, surviving requires becoming digitally agile and creating competitive advantage around customers' expectations. In fact, many incumbents may have a surprising advantage as they have the technological tools to identify customer expectations. Furthermore, incumbents may also have certain capabilities either in-house or through partners that create them ready access to digital disruption. The key to effectively engaging with digitalization to fulfil customer expectations is to understand where the different types of digitalization interconnect and interact. (Crittenden et al., 2019) Those incumbents that are able to combine their existing capabilities and to take advantage of the changes around them are the only ones that can succeed in this competitive environment (Ansari & Riasi, 2016; Riasi & Pourmiri, 2015, as cited by Bankewitz, 2016).

It is clear that companies who ignore these changes in customers' needs and focus only on their existing business models and operations, will quickly be challenged by companies who build their services on customer-centricity. However, in some cases, digital transformations are not found to be challenging because of the lack of knowledge and will, but because of the existing operations and legacy technology infrastructure that creates a risk to companies. The barriers of incumbent companies to change often origin from the perceived transition costs related to adopting new technologies as well as firm inertia. It is argued that incumbent firms can be too committed to their current organizational structures and the models of operating, as well as their routinized behaviours, that prevent them from fully adopting and benefiting from new technologies in the digital era (Ansari & Krop, 2012; Braganza, Awazu, & Desouza, 2009; Hill & Rothaermel, 2003; Obal, 2013; as cited by Crittenden et al., 2019). According to Beasley (2018; as cited by Sun 2018), the risk concerns especially large companies which often have the legacy and extensive operations which may cause challenges to adapt quickly to competition posed by new, "born digital" market entrants. (Sun, 2018).

Finally, in order to remain competitive in the era of digitalization and the startup-driven digital disruption, incumbents are challenged to learn to see digitalization as an opportunity for themselves. Furthermore, companies need to understand the different types of digitalization, which are discussed in the next section. No matter where the disruption origins, incumbents have the possibility to use their own digital experience as a strategic, evolutionary asset when entering the path of digitalization (Crittenden et al., 2019).

2.2.2 The different ways for digitalization to take place

According to Bughin et al. (2018), only a few executives have a holistic view of what digital really means and how it does and will take place in different businesses. While some executives focus on digital marketing or sales, some of them see digital business as an improvement of what their current IT function does. While it is true that digitalization can, for example, improve the productivity of a company, the conversation is often too technology-driven. Digitalization introduces new technologies, large data sets and business models which altogether appear as new products and services but also as new business processes. In fact, technology acts only as an enabler for new business practices and new ways of working. Through new ways of doing business, digitalization offers companies the opportunity to build comparative competitive advantage, utilize and refine knowledge (Lakaniemi, 2014). Therefore, incumbents' focus should be also on the exploitation of intellectual capital, global scalability of products and services, new business models, and integration with innovation and business ecosystems and digital platforms. (TEM, n.d.)

Digitalization does increase the importance of services and networked practices. Crittenden et al. (2019) have recognized that digitalization typically occurs in three different ways in different functions and at different locations in the business model. Besides the organizational performance and customer-centricity, Crittenden et al. (2019) emphasize the role of incumbents' channels. As a result, they suggest a model called digitalization triumvirate (Figure 1) and they argue that in order to succeed in digitalization, incumbents should focus on three types of digitalization: process digitalization, communications digitalization and buyer digitalization

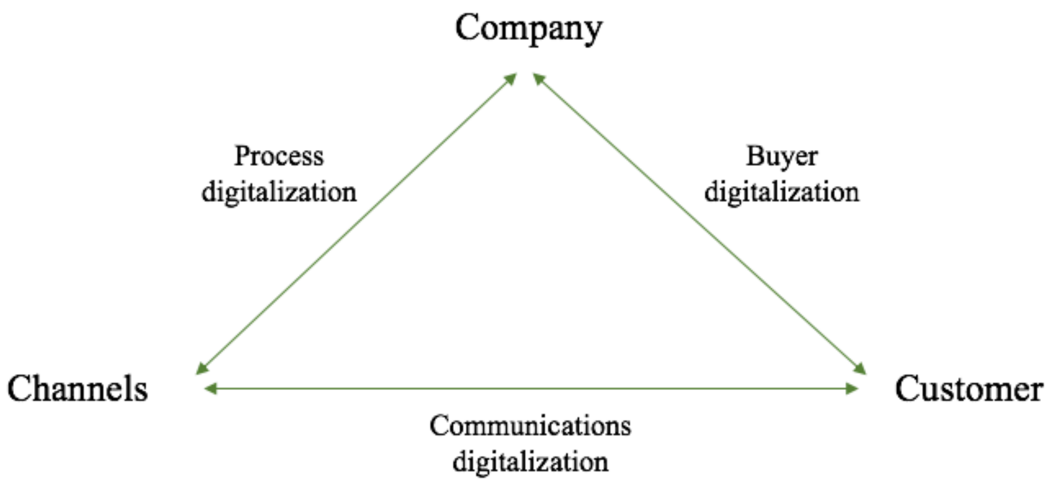

Figure 1. Digitalization triumvirate (Crittenden et al., 2019)

Firstly, the goal of process digitalization is to create competitive advantage through operational excellence which is achieved by automating internal information processes and transferring and sharing of information among employees, channels, and customers. In practice, this could mean investing in better CRM processes but there are various digital process technologies that can help incumbents to improve the experience for all participants in the value chain. Secondly, incumbents may benefit from interactive digital media through communications digitalization. This way, incumbents are provided with an enormous amount of information about customer behaviour which, again, enables building closer relationships between the channel members and the customers. Through communications digitalization, companies can improve their customer service, reduce engagement costs, and enable better reach. Thirdly, buyer digitalization targets renewing customer relationships, creating multiple touch points between the customer and the company, and engaging customers in close collaboration and co-creation with the company. (Crittenden et al., 2019)

Interestingly, there are significant differences in how different-sized Finnish companies expect digitalization to occur in their business. In 2013, Finnish executives from large companies described digitalization especially as a driver for efficiency, cost savings, and automation of work phases. They also emphasized four major trends in how digitalization occurs, including the rise of consumer-oriented technologies in business use; the increasing use of cloud services; the continuous mobilization and virtualization of activities, such as communication and the proper use of social media. On the other hand, in Finnish mid-sized companies, digitalization was expected to modernize products, logistics, customer interface and marketing, but interestingly, cost savings, efficiency, or automation of processes were rarely mentioned as key drivers for digitalization in mid-sized companies. The leaders of medium-sized companies also emphasized digitalization as an enabler for new markets, customers and offerings. (Lakaniemi, 2014)

2.2.3 Digitalization as a part of the strategy

According to Crittenden et al. (2019), digitalization should be aligned with the broader business strategy of a company. However, as digitalization is at renewing companies core businesses, customer relationships and key processes, it is clear that companies need to create a digital strategy. Having a clear digital strategy combined with a culture and leadership enhancing the digital transformation is what separates digital leaders from rest of the companies. Furthermore, the lack of strategy and competing priorities are companies' main obstacles in the way of digital maturity. (Kane et al., 2015).

Kane et al. (2015) studied the challenges and opportunities related to digital business as well as companies' maturity levels regarding digital transformation and digital strategy. Their survey gathered insights from a wide range of industries, including total 4,800 business executives, managers and analysts from different-sized organizations and from 129 countries. One of their greatest findings was that the lack of a digital strategy is the most significant barrier to digital transformation for companies that are in their early stages regarding digital maturity. A strategic focus and the existence of a clear digital strategy also separate digitally mature companies from less mature ones: according to the survey, only 15% of respondents from digitally less mature companies say that their organizations have a clear and coherent digital strategy and their strategies have mainly operational focus. Bughin et al. (2018) found similar evidence as they state that many organizations still stick with traditional strategy-development processes that follow annual cycles. At the same time, digitally more mature companies develop their strategies focusing on transforming their business; more than 80% of the digitally maturing companies did follow a digital strategy. (Kane et al., 2015)

What defines a digital strategy are its scope and objectives. By scope and objectives, Kane et al. (2015) mean the desired impact of the digital strategy, whether it aims at improving operational performance or transforming the company's entire business. As discussed earlier, adopting new technology will not create a competitive advantage on its own but it needs to serve a strategic business purpose. According to their study, almost

90% of respondents said that their main objective is business transformation. While less digitally mature companies tend to fell on focusing on individual technologies, more digitally mature companies aim at harnessing technologies to achieve strategic ends. (Kane et al., 2015)

Investments in digitalization need to rely on strategic decision-making, as they should be made to protect and create new value for customers and leverage existing strengths in new ways. Investing in the latest technology is not a good strategic decision unless it enhances value creation. As discussed earlier, digitalization may, for example, provide opportunities for incumbent companies to improve and widen their product and service offering or improve cost-efficiency by enhancing the organizational performance of an incumbent in its existing business processes. (Nylén & Holmström, 2015; as cited by Crittenden et al., 2019) One of the key questions in digital strategy is to decide, how much an incumbent should focus on investing into new technologies and business opportunities and how much resources should be allocated to maintain the existing, valuable business that serves the existing customers. According to studies, an important element of good corporate governance is to find this balance between the company's performance today and the ability to find competitive advantage in the future (Coulson-Thomas, 2001; as cited by Coulson-Thomas, 2007).

Two critical components of strategy execution are culture and leadership. Investing only in technology and dismissing investments in the development of organizational capabilities will be a short road for any company. Understanding the capabilities required for digital transformation is crucial when executing the digital strategy. (Kane et al., 2015) According to Suvanto et al. (2018), compared to our Nordic neighbours, especially large Finnish companies are good at making use of technology, but the mere implementation of technologies without investing in organizational capabilities that ensure their impact will not lead to the desired success in digitalization. Furthermore, companies need to engage their employees in executing the digital strategy. According to Kane et al. (2015), digitally maturing companies are four times more likely to provide their employees with training and needed skills – compared to companies that are lacking behind in digital maturity. Investing in organization's employees and intellectual competence means deciding about allocation of limited resources and about investing in the future of the company.

In order to make decisions about allocating resources, the company needs information about both, internal and external factors. According to Townsend (2007), the discussions about required resources should include three types of resources: financial resources, leadership and organizational resources and technological competency. (Townsend, 2007) As suggested earlier, CEOs and boards should work collaboratively in this matter as a CEO is able to strategize from an organization's perspective and he/she should be able to rely on the board's financial expertise but also their understanding of the market and other external factors that shape the company's future environment. Unfortunately, according to Townsend (2007), there is often different understanding between boards and CEOs regarding the financial resources required to implement the strategy. However, clarity in this matter is required in order to help companies' management to execute digital strategies. By discussing and outlining the financial, organizational and leadership capabilities and resources required to implement the strategy, the board and the CEO are able to achieve a mutual understanding about realistic and achievable plans. (Townsend, 2007)

No matter how large scope or what objectives companies have related to digital transformation, the success of the journey will not depend on technology but strategy, culture and leadership. According to Kane et al. (2015), in order to direct their companies towards a digitally transformed future, business leaders should first ask themselves three questions:

1. *Does our organization have a digital strategy that goes beyond implementing technologies?*
2. *Does our company culture foster digital initiatives?*
3. *Is our organization confident in its leadership's digital fluency?*

2.3 How managing digitalization challenges boards to change

As digitalization has shown to have a tremendous impact on the competitive business environment and strategic perspective of organizations, researchers have started to understand what kind of impact digitalization will have in companies' management practices (Åberg et al., 2017). In order to add more value and to make a greater contribution to companies' growth, boards are required to challenge their conventional thinking and question traditional board practices (Coulson-Thomas, 2007). According to Kane et al. (2015), leading by example is crucial in order to succeed in digital transformation. Over 50% of respondents from the digitally mature companies say that their digital strategy is led by a single person or a handful of people and typically this group includes someone at the upper management. In the digitally less mature companies, instead, only around 34% of respondents have a dedicated executive or group driving digital efforts. Respectively, the employees of the digitally more mature companies trust their leaders' ability to contribute in digital strategy: more than 75 per cent of respondents from these companies see that their leaders have sufficient skills to lead the company's digital strategy and nearly 90% say their leaders have sufficient understanding of digital trends and technologies. (Kane et al., 2015) In order to succeed in digital strategy and to win in the digital future, boards are now required to adopt a new role as leaders. New ways of thinking are required when it comes to the composition of boards, creating new decision-making culture and deciding about agendas. Boards need to use their time in solving new type issues, re-thinking their capabilities and developing a new understanding of their role. (Felton & Fritz, 2005)

2.3.1 What needs to be changed in boards' approach

In today's fast-changing world, it is reasonable to question if traditional boards are still able to create value for organizations and society tomorrow (Bankewitz, 2016). According to Felton and Fritz (2005), boards of directors are, indeed, increasingly interested in getting more involved in three areas of contribution in companies digital future. First of all, directors are interested in making long-term improvements in companies' ability to survive and develop but also improving short-term financial performance. Secondly, directors are more involved in strategy work and risk assessment; and thirdly, they also are more interested in improving leadership. Moreover, Åberg et al. (2017) argue that there are a number of specific digital trends that affect specifically how boards get involved in the strategy work of companies. These trends include changing strategic contexts, data-driven decision making, short term strategizing, and disappearance of organizational boundaries. Considering these challenges as well as the changed realities as of digitalization, the way boards contribute to strategy needs new perspectives and examining the following changes in boards' approach.

1. Focusing on the long-term health of companies: In order to be able to make long-term improvements in companies' ability to survive and develop, directors need to significantly change their perspective from evaluating the past to understanding the new competition. This also means creating the right balance between short- and long-term performance and keeping eye on not only current financial performance but to examining various external and internal indicators and risks. These include factors such as network positioning, market performance and operational excellence but also a regulatory and organizational risk. (Felton & Fritz, 2005) As digitalization changes companies' existing value-chains and business models, profits become redistributed (Åberg et al., 2017) which requires companies' boards to focus on long-term corporate health from various perspectives – not only from the traditional, financial perspective. According to Felton and Fritz (2005), the new dimensions of corporate health include also operations (e.g. physical and intellectual assets, operational risk), organization (e.g. capabilities, culture, values and employee satisfaction), networks (e.g. societal factors and media) and market (e.g. customers, partners, suppliers and competitors).

2. Adopting data-driven decision-making culture: Secondly, the increased scale, scope, and frequency of updated data change the way that organizations and their decision-makers may turn data into the fuel of strategy and decision making. The availability of constantly updated data creates also the availability of real-time information about customers and the company's competitive environment (Constantiou & Kallinikos, 2015) which enables a firm to quickly sense and seize opportunities through real-time responses (Bankewitz et al., 2016). This, however, requires changing the decision-making culture of companies and boards. The use of data forces senior managers to move from intuitive decision-making to embrace evidence-based decisions (Åberg et al., 2017).

3. Adaptability and short-term strategizing: Traditionally, boards have focused on long-term competitive strategies (brought to them by management). Unfortunately, the fast-changing competitive environment does no longer enable locking these kinds of long-term strategies, and companies are required to learn short-term strategizing and utilizing real-time data in strategic decision-making. Annual strategy reviews are no longer sufficient, but they need to be compressed to a quarterly time frame and refined in real-time based on market insights. (Bughin et al., 2018) Adaptability to constantly changing environments has become a new success factor as companies try to adjust to short-term strategic planning. This requires gathering evidence of the market changes as well as the financial, operative and technological conditions that enable boards to make well-informed decisions (Heidrick & Struggles, 2014). Successful companies study their customers in real time to anticipate and influence their behaviour, adjust strategies based on customer data and change direction if or when required. (Åberg et al., 2017)

4. Understanding the disappearance of organizational and industry boundaries: In the past, most companies have focused on establishing long-lasting interaction with their suppliers, customers, and other external parties operating in a certain industry. However, especially the rise of platform-based ecosystems now allows digital players to move easily across industries and incumbents are facing new kind of cross-sector competition. In the new digital world of ecosystems, industry boundaries are blurring, and boards are required to adopt a much broader frame of reference in their strategic thinking. According to Bughin et al. (2018), the emergence of digital ecosystems could account for more than 30 per cent of global corporate revenues by 2025. Traditional, industry-specific expertise of board members is no longer enough, but they need to be able to recognize threats and opportunities across industries and at intersections of old industries.

5. Developing leadership instead of governance Studies have suggested that a board of directors may be the one organizational unit that has the greatest impact on companies' performance and behaviour (Huse, 2007). As discussed earlier, future boards need to adopt new forms of leadership instead of traditional corporate governance. Especially the role of a chairman now involves a new kind of external awareness but also enabling the board to excel as a team. Chairmen are now required to develop new kind of leadership skills and lead by example and engaging the management and board members who meet relatively rarely. The most successful chairmen are able to develop team dynamics in which people skills become vital. At the same time, the chairman is required to stay close enough to the everyday business of the company in order to be able to ask relevant questions and to have meaningful conversations with the management. The need for external awareness demands chairmen to spend time and gather knowledge outside of the company. (Heidrick & Struggles, 2014)

2.3.2 Building dynamic boards

Companies across the world are increasingly expecting boards to move beyond their traditional role and to create flexible and dynamic governance. As a result of the aforementioned changes in boards' approaches, today's boards are expected to build dynamic boards with the ability to lead companies in the new digital world. When the new approaches are adopted, building dynamic boards becomes possible. The new demand for building dynamic boards origins from what we have learned earlier: from the fact that leadership starts at board level, and secondly, from the fact that the governance of today's companies aims at enabling and driving business performance (Heidrick & Struggles, 2014).

As discussed in chapter 2.1, the relationship between boards' performance and companies' success has been proved in many studies. As companies in today's fast-changing business environment are required to build dynamic capabilities, it is only rational to start from building dynamic boards. The new type of dynamic governance means constantly evolving, the ability to keep up continuous awareness of external events and the agility to respond quickly to the changes in the business environment. It also means giving up defensive and bureaucratic nature of corporate governance. Instead, building dynamic boards requires moving towards a new era where board work is not seen as an act of compliance but upholding a spirit of governance that is directly linked to the culture and performance of a company. In the first place, the new dynamic boards are about pursuing maximum engagement and impact. (Heidrick & Struggles, 2014)

Several studies have suggested that developing more dynamic boards and board capabilities is a fundamental part of building long-term enterprise success (Åberg et al., 2017). These capabilities build a lasting foundation for the company's ability to integrate, build and reconfigure existing competencies in order to adapt to changing environments. As discussed in the sections 2.1.2 and 2.3.1, boards are now required to take an active role companies strategy work. According to Åberg et al (2017), developing and using boards' dynamic capabilities in strategizing enhances taking valuable strategic actions.

As suggested earlier in section 2.1.1, keeping the size of the board small could improve boards' efficiency which serves the purpose of building dynamic boards. Dynamic board work requires the ability to have a maturing conversation between the stakeholders and board members of a company, but also between board members themselves. The capabilities of a chairman to lead the board as a team become critical as well as the board members' level of commitment which was discussed earlier in section 2.1.2. Therefore, when organizations aim at building dynamic boards, it becomes relevant to evaluate the board members from the perspective of commitment and willingness to invest time. Robust and continuous evaluation of the board's performance (discussed in section 2.1.4) becomes required as well as the ability to identify and develop new talents. Furthermore, besides investing in improving internal collaboration, dynamic governance also demands that boards be more externally focused and connected with a larger group of stakeholders and society (Heidrick & Struggles, 2014), as was discussed in the section 2.3.1.

Åberg et al. (2017) mention three dynamic capabilities, introduced by Teece (2007), that relevant for the future boards: sensing, seizing, and reconfiguring. Firstly, the term *sensing* means the capability to not only identify opportunities and threats but also to shape them through the company's own actions. Secondly, the term *seizing* refers to the capability of making the right decisions and executing those decisions. Finally, *reconfiguring*, according to Åberg et al. (2017), involves the capability of enhancing and revising the existing organizational assets and structures in response to the changes in markets and technologies. All together, these three collective capabilities have an important role in influencing the strategic decision-making of boards (Åberg et al., 2017).

2.3.3 From IT management to strategic IT governance

Besides the emerging need for boards to adopt new approaches and build dynamic capabilities related to company governance, there is also a new branch of governance that has become increasingly important for companies' success in the digital era. This branch of the overall governance is called information technology (IT) governance which focuses on IT infrastructure, organizations skills, assets and processes, and systems. IT governance introduces ways to evaluate companies' performance and decisions in the light of value generation. Also, the risk associated with organizational practices come revealed. Eventually, IT governance examines IT investments and their alignment with a company's strategy that aims at creating value for all stakeholders. (Morabito, 2014)

Unlike traditional corporate governance, IT governance requires involvement from everyone in the company, from the chairman and board members to managers and employees. Furthermore, even customers have involved in IT governance as its fundamental purpose is value creation, not managing systems or processes as an actual purpose. In this matter, IT governance differs from traditional IT management as it fundamentally serves a new type of purpose. While traditional IT management concerns the good administration of IT assets and resources, the new IT governance adds two important dimensions: a *vision* and leadership. IT governance build the foundation for making fast, informed and reliable decisions based on continuously updated data; in other words, building data-driven decision-making culture across the company. Eventually, one purpose of IT governance is to ensure that investments in IT resources bring results and returns for the stakeholders who have made the investments. (Morabito, 2014)

As a result, it is easy to understand that IT governance should have an important place on the board's agenda. In fact, in order to have a true impact on companies' decision-making culture, *strategizing* and value creation, IT governance requires commitment and involvement especially from the board of directors working together with executives and IT management. This, however, requires accountability, transparency, decentralization, and management reform which affect how IT governance can be implementation implemented in organizations. (Morabito, 2014)

3 Data and methods

In order to understand how boards contribute to managing digital transformations in Finnish companies, I conducted a quantitative survey appointed to chairmen and board members from Finnish large and mid-sized companies. In the survey, I approached the research question from different perspectives using a Likert scale and multiple option questions. These methods were chosen because the intention of the survey was to study the respondents' subjective opinions about their companies' competitive situation and digitalization in their industries as well as how they experienced their boards' role and contribution and what kind of role digitalization plays in their companies' strategies. The purpose of the survey was to bring results that may have independent scientific value and/or lead to practical suggestions for boards in order to help them to improve, for example, their decision-making practices and the composition of boards.

In order to reach the potential respondents, chairmen and board members from Finnish large and mid-sized companies, I requested help from two Finnish management networks, Kasvuryhmä and Boardman. Both organizations sent the survey out for their own members, targeting the selected group. In total, the survey was sent by email to around 120 chairmen and board members. The survey was anonymous, and the only ID of respondents was a time stamp. The survey did include a few general background information questions but identifying companies based on those questions is still extremely difficult if not impossible. The possibility to answer anonymously was a key issue in motivating board members from, for example, publicly listed companies to answer to the survey. The survey was sent out in the middle of March and by the end of April, I got 33 responses from board members from different companies. Therefore, the answer rate was around 27%. The number of responses was a little bit below of my original target amount; 50 responses. However, soon after sending the survey out, I was facing the fact that my target audience consists of extremely busy leaders and reaching them was more difficult than expected.

In the survey, I chose to approach the research question from seven different perspectives, i.e. themes that included five questions each. Each of the themes was discussed in the theory part (chapter 2) at least as a sub-theme if not as the main title. The themes of the survey were:

1. The way that the company is attached to digitalization – future possibilities and objectives

2. The board's vision of the competitive situation of their industry
3. Strategy work in the company
4. Digitalization as a part of the strategy
5. The resourcing of strategic digital plans
6. The board's role in managing digitalization
7. The composition and competencies of the board

Selecting these specific themes was not a coincidence but a result of several discussions with managers and professionals of digital business. I also noticed that previous studies and literature focused on these issues when exploring boards' role in building a sustainable competitive advantage in the digital era. In addition to the 35 Likert scale and multiple option questions regarding the aforementioned themes, the respondents were also asked to fill in the basic information about their company, such as company size and industry, but also about themselves as board members, i.e. what their role is and how long they had acted as board members in that specific company. These questions were set in order to see if there are any evidence of, for example, differences between industries.

The industries represented in the survey results (Figure 1) were car import (1 respondent), construction (3 respondents), consultancy and professional services (3 respondents), energy industry (1 respondent), food industry (3 respondents), healthcare technology (1 respondent), IT and software industry (5 respondents), logistics (2 respondents), manufacturing (5 respondents), media and printing (3 respondents), real estate business (1 respondent), and trade and service business (5 respondents).

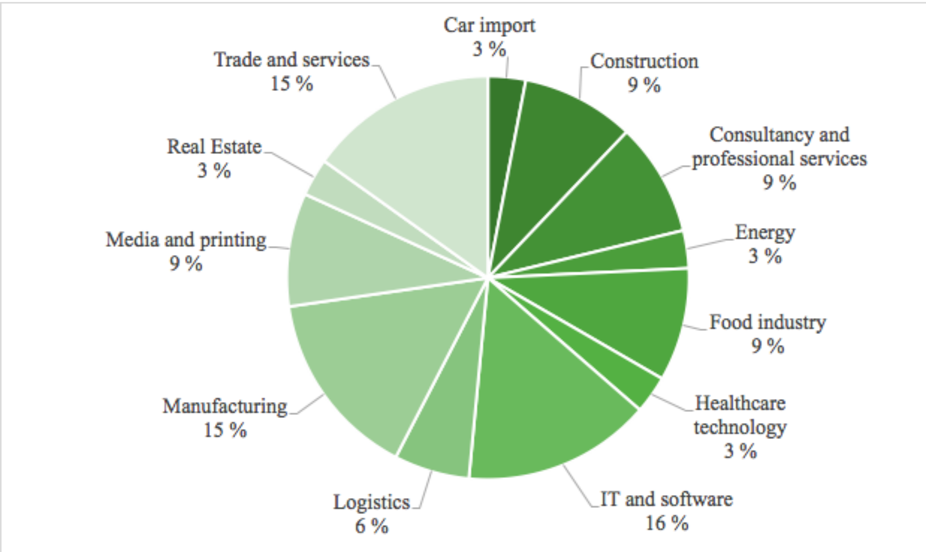

Figure 2. The industries represented in the survey results.

The majority of the companies (58%) operated with a B2B business model, while only 6% of the respondents represented companies operating solely with a B2C business model. A significant part of the respondents represented companies that served both, business clients and consumers (Figure 3.). It is also worth mentioning, that interestingly, 42% of the companies were family-owned businesses.

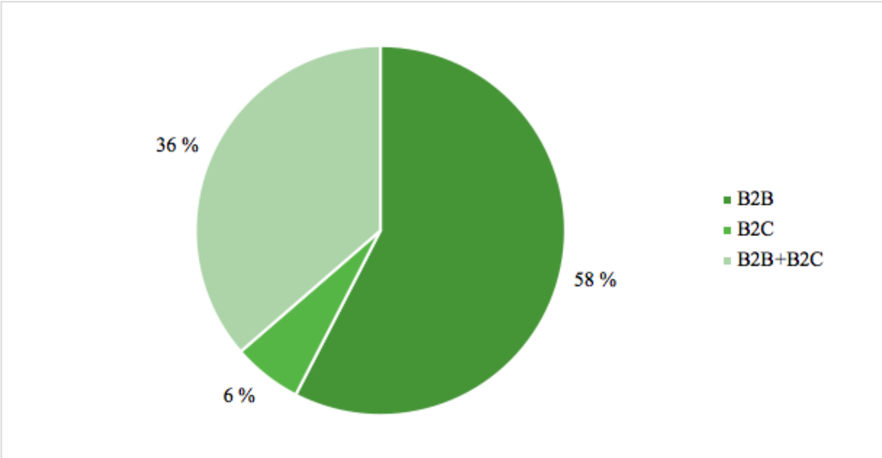

Figure 3. Business models of the companies represented.

There were also differences in the companies' annual revenues (Figure 4.) and personnel sizes (Figure 5.). The two biggest respondent groups in terms of annual revenue were companies with less than 50 million euros (42%) and 50-200 million euros (30%) in annual revenues. However, there were also a few respondents who represented companies with 200-500 M€ (15%), 500-1.000 M€ (3%) and even over 1.000 M€ (9%) in annual revenues. The personnel sizes varied even more: the biggest respondent groups representing companies were 50-250 people (30%) and more than 1.000 people (24%).

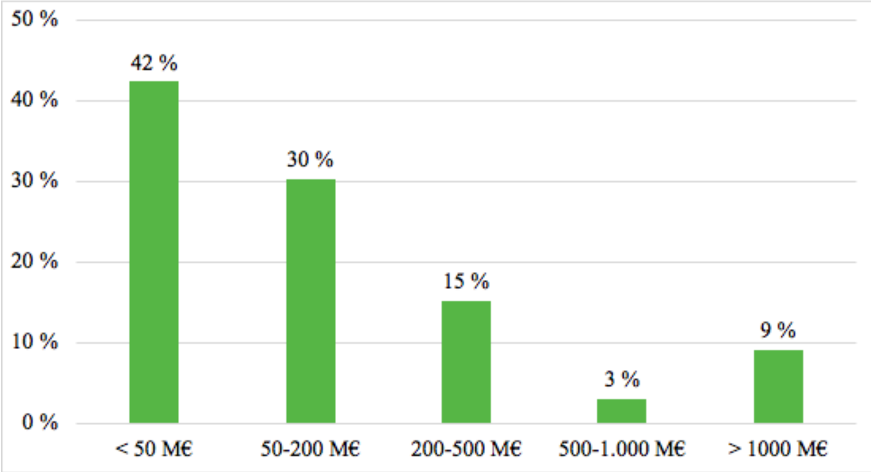

Figure 4. *Annual revenues of the companies represented*

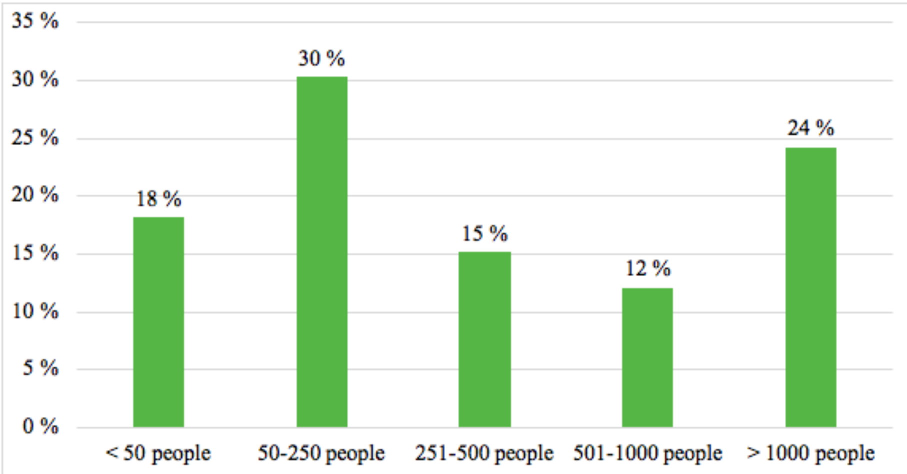

Figure 5. *Personnel sizes of the companies represented*

What comes to the roles of the respondents in their boards, a significant number of the respondents, a total of 19 out of 33, held a position as a chairman of the company (Figure 6.). Most of the respondents (55%) had also been in their roles for more than five years. 24% of the respondents had served in their position for three to five years and only 21% less than three years (Figure 7.).

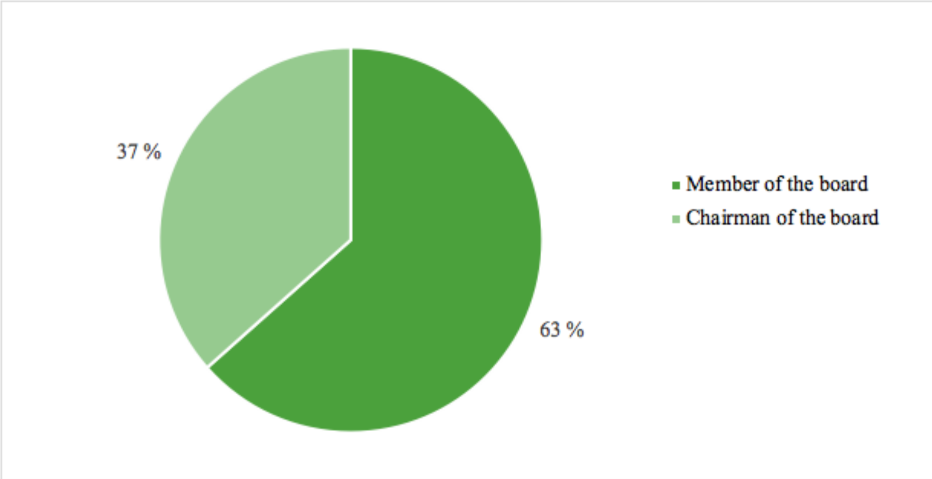

Figure 6. *The respondents' role in their boards*

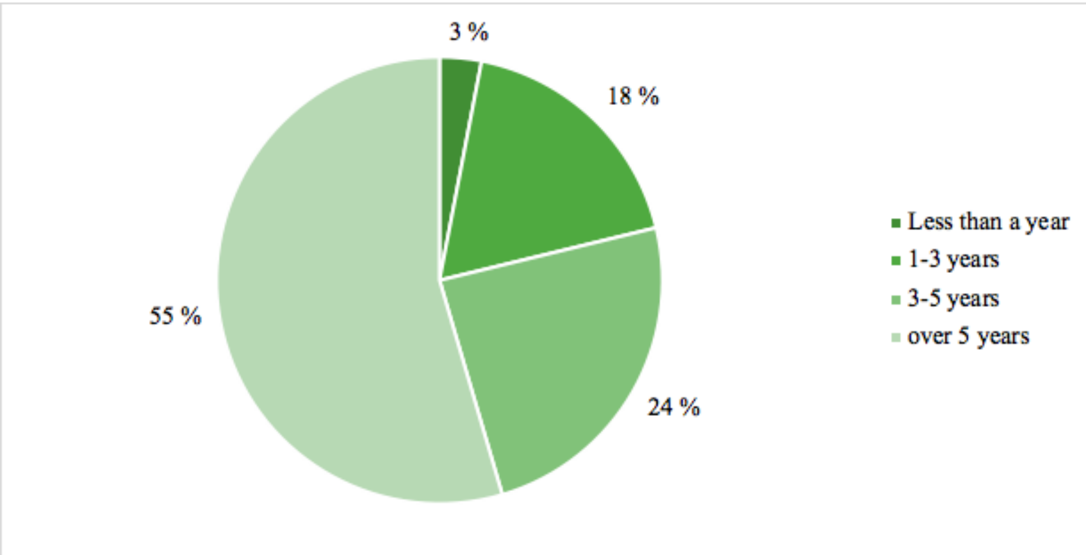

Figure 7. *The respondents' years as board members*

4 Findings

The aim of the survey was to gain insight into boards' roles and capabilities in managing digitalization in Finnish large and mid-sized companies. Furthermore, the survey aimed at exploring how board members and chairmen see the changes, opportunities and threats as well as the competitive situation of their industries.

The survey consists of seven different themes that approach the research topic from a different perspective, i.e. different themes. This chapter examines the findings of the survey and tries to find connections between the respondents' answers under different themes. As the reporting of findings goes further, it becomes possible to start finding more connections between the answers and therefore, also the analysis gets deeper as we proceed. However, the more throughout analysis takes place only in the fifth chapter which links the findings to the theory chapter.

4.1 Theme 1: Companies' future possibilities and objectives related to digitalization

The purpose of the first set of questions was to find out what digitalization represents for the companies included in the survey as well as what kind of objectives the board members and chairmen have related to digitalization. In a sense, this first set of questions creates a foundation for the rest of the questions and many of the responses in the later questions are reflected in the answers given in this first set. As the results suggest in this first theme, for the incumbent companies included in this survey, digitalization does represent remarkable growth opportunities but also ways to improve the efficiency of their current business. The results of the questions under the first theme are presented below in Figure 8.

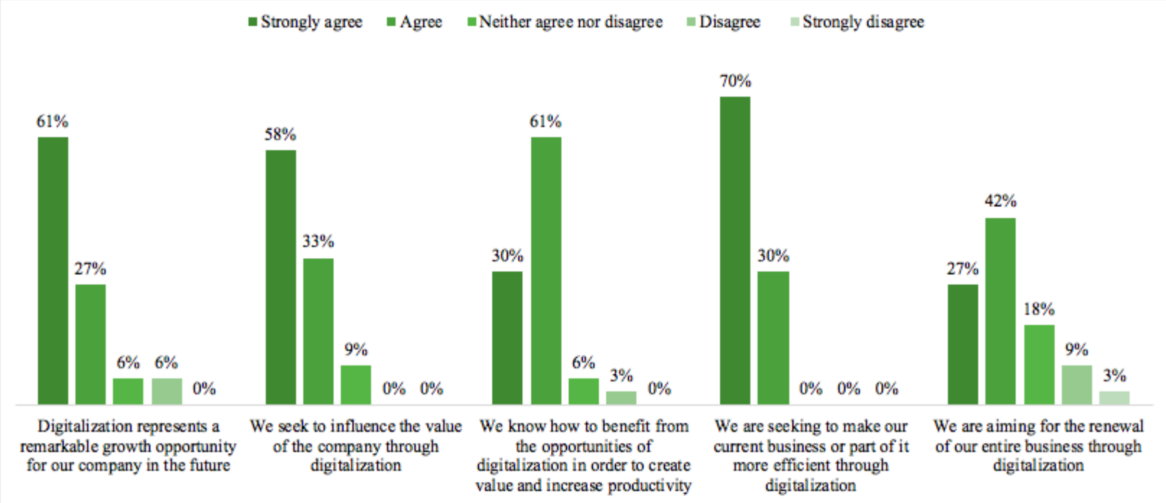

Figure 8. The respondents view on the future possibilities and objectives related to digitalization

Statement 1: Digitalization represents a remarkable growth opportunity for our company in the future

In the first question, the intention was to find out, how remarkable opportunities digitalization represents for the companies included in the survey. In a sense, this question served as a foundation but also as an explanatory factor for the following questions: whether the board members and chairmen expect digitalization to provide great opportunities for their companies, this should also be reflected in the decision-making. Indeed, as many as 88% of the respondents either strongly agreed (61%) or agreed (27%) with the view that digitalization represents a remarkable growth opportunity for their company in the future. Only 6% disagreed with the view and 6% neither agree nor disagree.

Those two respondents who disagreed on that digitalization represents a remarkable growth opportunity for their companies in the future, came from manufacturing and food industry. Both worked as chairmen and had worked in their boards over 5 years. At the same time, those both industries were represented among companies who strongly agreed on the statement and are expecting remarkable growth opportunities from digitalization. Therefore, at least with such a small sampling, it is not possible to find evidence about differences between industries in this matter, i.e. that digitalization would be seen more important in some industries, according to board members.

Statement 2: We seek to influence the value of the company through digitalization

As was discussed in the theory part, companies may have different kinds of objectives related to digitalization. While some companies have relatively small expectations and they focus on, for example, improving efficiency through digitalization, some companies may see their whole future, i.e. company value, to be dependent on their ability to excel in their digital strategies. In respect to the previous question, again almost all the respondents either agreed (33%) or strongly agreed (58%) that their companies are seeking to influence the value of the company through digitalization. Only 9% of the respondents did not agree or disagree and none of the respondents disagreed with the statement and these respondents had very little in common in terms of, for example, industry or company size.

Statement 3: We know how to benefit from the opportunities of digitalization in order to create value and increase productivity

It was expected that Finnish large and mid-sized companies do see great opportunities in digitalization, but another question is, whether or not the companies have identified the practical ways to benefit from these opportunities, and actually create new value for customers and increase their productivity.

The respondents were, again, confident about their company's knowledge on how to benefit from the opportunities of digitalization in order to create value and increase productivity; 61% of the respondents agreed and 30% strongly agreed with this statement. Only one respondent disagreed with the statement and 6% had a neutral response. The majority of those respondents who strongly agreed that they know how to benefit from the opportunities of digitalization represented companies that were not family-owned. Nine out of ten companies were B2B companies, although six of them also had B2C business. These companies represented almost all the industries included in the survey.

Statement 4: We are seeking to make our current business or part of it more efficient through digitalization

The purpose of the fourth and fifth questions was to examine companies' objectives related to digitalization, i.e. whether they seek to improve the efficiency of their existing business operations or if they aim at renewing their entire business through digitalization. Based on the results, it seems that at least these Finnish companies are mainly looking for ways to improve their efficiency through digitalization but not truly trying to re-think their core businesses. 70 % of respondents strongly agreed and 30% agreed that their companies are seeking to make their current business (or part of it) more efficient through digitalization.

Statement 5: We are aiming for the renewal of our entire business through digitalization

Respectively, while asked if the companies are aiming for the renewal of our entire business through digitalization, only 27% strongly agreed and 42% agreed with the statement. 18% of board members had a neutral response and 12% either disagreed or strongly disagreed. 2/4 family-owned, B2B companies. Their company sizes seem to be a bit smaller in terms of revenue and staff. They represented various industries and the respondents have worked relatively long in their boards.

4.2 Theme 2: The board's vision of the competitive situation of their industry

What comes to the board members' vision of the competitive situation of their industry, there was a bit of dispersion between respondents but also industries. Several studies, that have also been discussed earlier in this thesis, have shown that digitalization does affect companies and competition in all industries and denial of that inevitable phenomenon may be fatal for incumbent companies. The results of the questions under the second theme are presented below in Figure 9.

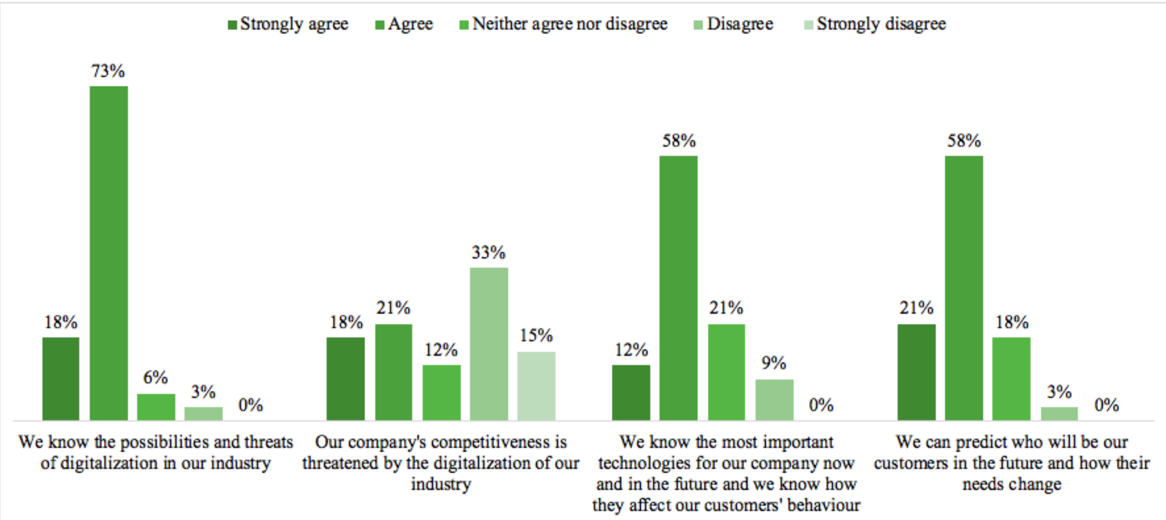

Figure 9. The respondents' vision of the competitive situation of their industry

Statement 6: We know the possibilities and threats of digitalization in our industry

In order to be able to contribute to a company's strategy and to have a meaningful discussion with the management, boards need to have a good understanding of the possibilities and threats facing the company. As has been argued earlier in this thesis, digitalization creates both, remarkable changes and threats, such as the rise of new competitors, but also great opportunities for companies. Therefore, it is beneficial to examine the boards' understanding of digitalization-related possibilities and threats facing their own industry.

Again, the respondents were very confident about their industry knowledge: 91% of the respondents either strongly agreed (18%) or agreed (73%) on that they are aware of the threats and possibilities brought by digitalization. However, there were still 3% that disagreed with this statement and 6% had a neutral response. The one respondent who disagreed represented a family-owned company operating in the manufacturing industry. In contrast, from those strongly agreed, four out of six represented companies with B2C business, operating in various industries such as media, and food industry. Only one of these respondents worked as a chairman and the rest of them as board members.

Statement 7: Our company's competitiveness is threatened by the digitalization of our industry

Besides understanding the overall situation of the industry, boards should specifically understand the competitive situation from their company's own perspective. In this case, it is interesting to examine whether the board members and chairmen see their own companies' competitiveness to be threatened by the overall digitalization of their industry. This statement seemed to gain one of the biggest distributions in the whole survey. Interestingly, almost half of the respondents (48%) did not see the digitalization of their industry to be threatening their own companies' competitiveness as 33% of the respondents disagreed and 15% strongly disagreed with the statement. Only 21% agreed and 18% strongly agreed that their competitiveness was threatened. 12% neither agree nor disagree.

Those who strongly disagreed that their competitiveness is threatened by the digitalization of their industries came from the software industry, manufacturing and food industry. Otherwise, the respondents and their companies had very little in common. Interestingly, the same industries were represented also among those respondents who strongly agreed that their industries' digitalization threatens their competitiveness. These companies that were most worried about their competitiveness represented logistics, construction, media, software, and trade and service industries.

Statement 8: The disruption of our industry is expected to origin from...

In this multiple-option question, the respondents were able to choose more than one different option reflecting where they believed the disruption of their industry to origin from. The purpose of this question was to study whether the respondents were aware of the origins of possible disruption and, if yes, where they expect the industry disruption to origin from.

9 out of the 33 respondents identified only one source of disruption while most of the respondents identified two or even three possible sources of disruption. There was also a small group of respondents who answered that they do not know the source of possible disruption of their industry. These 5 respondents represented companies from manufacturing (3), food industry (1), and trade and service business (1), and all, except the latter one, were family-owned businesses. The majority of respondents saw the emergence of new players in the intersection of different industries as a possible source of disruption; 67% or the respondents chose this option as the only source or among other options. A significant number of respondents (42%) also believed their existing competitors to disrupt their industry and 33% saw the threat of foreign tech giants.

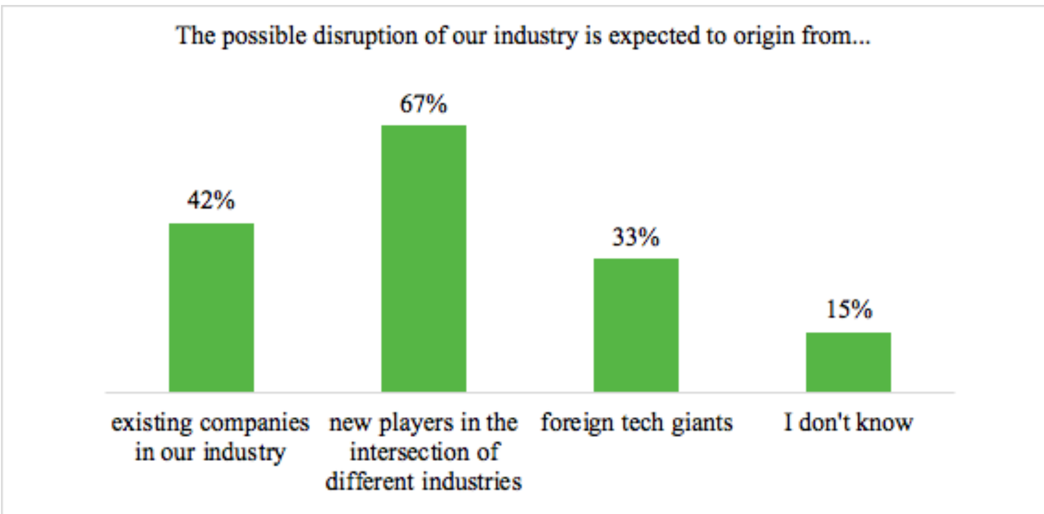

Figure 10. *The respondents' views when asked where they expected the possible disruption of their industry to origin from*

Statement 9: We know the most important technologies for our company now and in the future and we know how they affect our customers' behaviour

What comes to the knowledge of relevant technology and its impact on customers' behaviours, the respondents seemed to be relatively confident about their knowledge. Over half of the respondents (58%) agreed and 12% strongly agreed that know the most important technologies for their companies now and in the future and how these technologies affect their customers' behaviour. 21% neither agree nor disagree and a small group of respondents answered that they do not know these technologies or their effect as 9% of the respondents disagreed with the claim.

Those respondents who strongly agreed that they know the most important technologies for their companies and how they affect their customers' behaviour, represented mainly B2B businesses from IT and software, logistics and food industries. These companies were also relatively large in terms of revenue and staff. In contrast, those respondents who strongly disagreed with this statement came from relatively small companies with less than 50 M€ revenues and with 50-250 employees. These respondents were all chairmen who had worked in their current board for more than five years.

Statement 10: We are able to estimate who will be our customers in the future and how their needs change

Besides understanding the competition of the market as well as possible sources of disruption of the industry, boards should also have an in-depth understanding of customers and their needs. Furthermore, instead of analyzing the existing customer-base and their past behaviour, companies should be able to estimate the development of customer needs among their existing customers and possible future customers. Failing in this matter could be fatal for companies, as we may learn from, for example, the case of Nokia phones, as the company infamously underestimated customers' preference of touchscreens in smartphones. As a result, the company quickly lost the competition against Apple and other companies which invested in quality software in their smartphones equipped with touchscreens.

As the board members and chairmen were asked whether they are able to estimate who will be their customers in the future and how their needs change, the respondents seemed relatively confident about their customer knowledge. A significant majority of them saw that they are aware of the development in the customers' side as 58% of the respondents agreed and 21% strongly agreed with this statement. However, there was, again, a small group of uncertain respondents who either had a neutral attitude to this claim (18% of respondents) or disagreed (one respondent). These uncertain respondents represented various industries including car import, construction, real estate, trade and service businesses, consulting and professional services, and IT and software industry. Also, those who were most confident about their ability to estimate who will be their customers in the future and how their needs change represented companies from various industries. Furthermore, the majority of these companies had both B2B and B2C business. Another factor that these respondents had in common was that they had served as board members a relatively long time; either 3-5 years or more than 5 years.

4.3 Theme 3: Strategy work in the company

The third set of questions concerned strategy work, i.e. how strategies are built in Finnish large and mid-sized companies. The questions in this set aim at examining the contribution of boards in the creation of strategy as well as whether the boards know their companies' key strategic projects and how these are included and measured in the companies' strategies. The results of the questions under the third theme are presented in Figure 11.

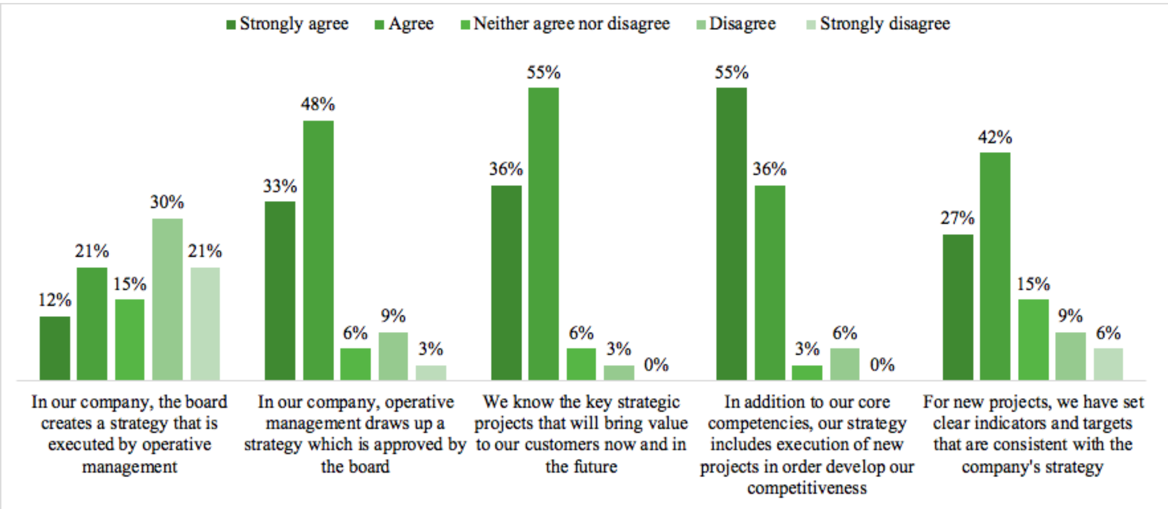

Figure 11. The respondents' view on strategy work in their companies

Statement 11: In our company, the board creates a strategy that is executed by the operative management; or *(Claim 12:) in our company, the operative management draws up a strategy which is approved by the board*

The purpose of these two questions combines was to gain an understanding of the boards' role in strategy work in the surveyed companies. As discussed in the theory section, boards may have very different levels of involvement in strategy work, from active contribution to sparring and acting as "a rubber stamp" for strategies created by operative management. The different levels of involvement can be explained by various reasons – which cannot all be included in this size of a survey – but at least it is beneficial to examine how the respondents experience their boards' contribution to strategy.

The common factor for those who strongly agreed that in their company, the board is the actor who creates the strategy, was that none of them worked as a chairman and also, three out of four had served only 1-3 years as board members. One respondent had served over five years in a family-owned business. Naturally, one might think that those respondents who strongly agreed that their board creates the strategy, would then disagree that their operative management creates it. Interestingly, this was not true in all cases. In general, the responses seem to be aligned so that either the respondents have preferred the other option (board/operative management as a creator of strategy) but there were also exceptions.

In short, the results indicate that in the majority of companies, operative management draws up a strategy which is approved by the board. On the other hand, as 32% of the respondents either strongly agreed (12%) or agreed (21%) that their board is the actor who creates a strategy, it indicates that in these companies, the board is at least somewhat involved in the strategy work.

Statement 13: We know the key strategic projects that will bring value to our customers now and in the future

Previously, 91% of the respondents had a positive view (61% of the respondents agreeing and 30% strongly agreeing) on their knowledge on how to benefit from the opportunities of digitalization in order to create value and increase productivity. Furthermore, 58% of the respondents agreed and 21% strongly agreed that they are able to estimate who will be our customers in the future and how their needs change. These results could be, in a sense, expected to be reflected also in this question, as here, the respondents were asked if their boards know the key strategic projects that will bring value to our customers now and in the future.

Therefore, it was no surprise that, when asked about strategic projects that aim at creating lasting value for customers, the board members were, once again, very optimistic. 91% of the respondents either agreed (55%) or strongly agreed (36%) that they know the key strategic projects that will bring value to our customers now and in the future. 6% had a neutral response and only one respondent disagreed with the statement. From those who strongly agreed that they know the key strategic projects that will bring value to our customers now and in the future, the clear majority (8 out of 12 respondents) worked as chairmen in their boards. Again, the respondents represented various industries but a notable amount of companies (7 out of 12) had also B2C business in addition to B2B business.

Statement 14: In our strategy, in addition to our core competencies we execute new projects to improve our competitiveness

Respectively to the previous statement, the companies were indeed actively trying to improve their competitiveness through the execution of new projects. This time, 55% of the respondents strongly agreed and 36% agreed that their companies' strategies included also new projects, in addition to their core competencies, in order to improve their companies' competitiveness. Only 6% of the respondents disagreed with the statement and one respondent had a neutral response. This time, there was very little in common between those respondents who either strongly disagreed or strongly agreed with the statement.

Statement 15: For new projects, we have set clear indicators and targets that are consistent with the company's strategy

What comes to measuring these new strategic projects, there was much dispersion in the responses. While in the two previous questions, the board members showed significant confidence in their companies' strategic projects, in this question, the board members were clearly less confident about measuring their projects. Now, only 27% strongly agreed and 42% agreed that their companies have set clear indicators and targets that are consistent with their companies' strategies. 15% neither agree nor disagree and 15% either disagreed (9% of respondents) or strongly disagreed (6%) with the statement. From those who either disagreed or strongly disagreed that they have set clear indicators and targets for new projects, 4 out 5 respondents came from family-owned businesses. Otherwise, they or their companies did not have much in common.

Even though the sample in this survey was relatively small, these results indicate that companies do not specifically excel in measuring their strategic efforts or the indicators and targets are not consistent with companies' overall strategies. If measuring is done, at least the boards are not familiar with these indicators and targets which raises a question of which premises the project investments are built on and how these boards aim at measuring the returns on investments. When a company decides to invest in a new strategic project, there should be clear targets and indicators for measuring the outcomes.

4.4 Theme 4: Digitalization as a part of the strategy

As the previous set of questions aimed at examining companies' overall strategic decision-making, execution of strategy and measuring the outcomes of strategic projects, the fourth set of questions explores how digitalization appears in the companies' strategies. The results of the questions under the fourth theme are presented below in Figure 12.

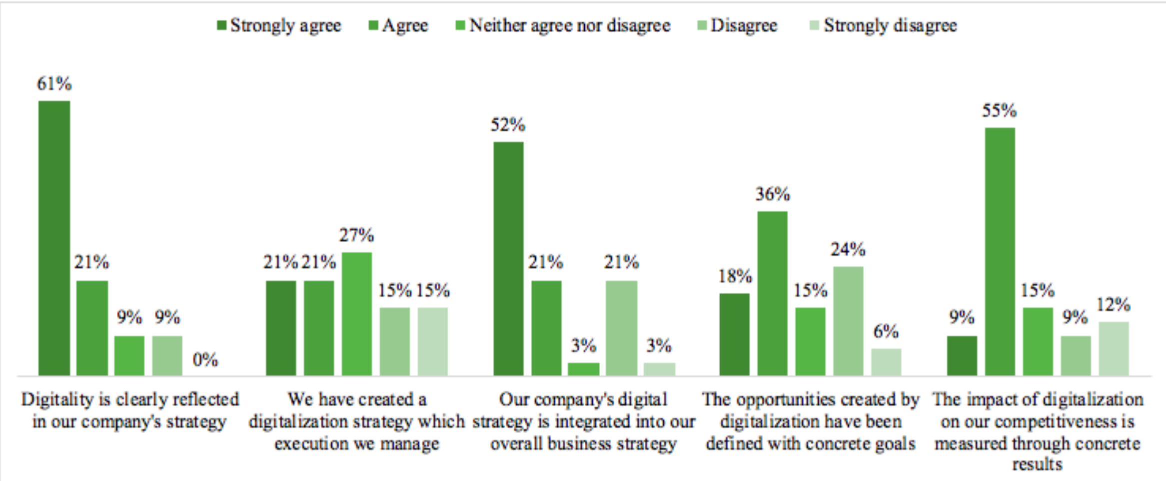

Figure 12. The respondents' view on digitalization as a part of the strategy

Statement 16: Digitality is clearly reflected in our company's strategy

When asked about how digitality is reflected in companies' strategies, the majority of the board members either strongly agreed (61%) or agreed (21%) that digitality is clearly reflected in their strategy. Only 9% disagreed with the statement and 9% had a neutral response. Those respondents who disagreed that digitality is clearly reflected in their strategy came from family-owned companies operating in the manufacturing and food industries. Interestingly, two out of three of them had previously agreed that digitalization represents remarkable growth opportunities for their companies. These respondents also either agreed or even strongly agreed that they seek to improve their efficiency through digitalization. Therefore, it is interesting that these opportunities and plans are not reflected in these companies' strategies.

Statement 17: We have created a digitalization strategy which execution is lead by the board

However, when asked about if the companies have created a specific digitalization strategy which execution is led by the board, there was, once again, more dispersion. While 42% of the respondents did either strongly agree (21%) or agree (21%) with the statement, 30% of the respondents either disagreed (15%) or strongly disagreed (15%).

Also, in this question, some of the results were in some sort of conflict with the respondents' previous opinions. Among those respondents who strongly disagreed that their companies have created digitalization strategy, are several respondents who previously said that they either seek to improve their efficiency and that digitalization represents great growth opportunities for them but, furthermore, those who strongly agreed that they aim at renewing their business through digitalization. Therefore, it is paradoxical that these board members had such high expectations towards digitalization, but their companies lack digitalization strategy. In contrast, those respondents who strongly agreed that their companies have digitalization strategies represented various industries such as logistics, construction and energy industries. These companies were also significantly big in terms of revenue and staff, including the two biggest companies in the whole survey. Only one of them was family-owned.

Statement 18: Our company's digital strategy is integrated into our overall business strategy

When the respondents were asked whether their company’s digital strategy is integrated into their overall business strategy, the results once again indicated that in the majority of companies, digitality is tightly included in the business strategy. Over half (52%) or the respondents strongly agreed and 21% agreed that their company's digital strategy is integrated into their overall business strategy. Interestingly, 21% also disagreed with the statement and 3% (one respondent) strongly disagreed.

Those respondents who either disagreed or strongly disagreed that their company's digital strategy is integrated into their overall business strategy were, in a sense, very consistent in their answers as the same individuals also disagreed their companies to have a digitalization strategy or that digitalization would be reflected into their overall strategy. Most of these companies were family-owned while, interestingly, only around 1 out of 5 companies were family-owned among the majority that strongly agreed with this statement. These same respondents were also coherent in their answers as all of them had said, for example, that digitalization represents great growth opportunities for their companies. In that case, companies should, indeed, have digital strategies tightly integrated into their overall strategy.

Statement 19: The opportunities created by digitalization have been defined with concrete goals

If digitality was clearly reflected in the companies' strategies, the opportunities provided by digitalization are remarkably less clearly defined in practice. The results included more dispersion than on average and now only 18% of the respondents strongly agreed and 36% agreed that the opportunities created by digitalization have been defined with concrete goals. 30% of the respondents either disagreed (24%) or strongly disagreed (6%) with the statement, and 15% had a neutral response. Among those respondents who either disagreed or strongly disagreed with this statement, there were many individuals that had previously strongly agreed that digitalization to not only represent remarkable growth opportunities but also that they seek to improve their efficiency or renew their entire business through digitalization. Some of them had also said previously that their boards know how to benefit from the opportunities of digitalization in order to create value and increase productivity. Controversially, it seems that these opportunities and expectations are not translated into concrete goals in these companies who disagreed with this statement.

Statement 20: The impact of digitalization on our competitiveness is measured through concrete results

Although digitalization was, according to the survey, expected to improve companies' competitiveness, only 9% of the respondents strongly agreed that the impact of digitalization on their competitiveness is measured through concrete results and 55% agreed with the statement. However, in addition to that 15 % of respondents who had a neutral response, over one-third of them either disagreed (9%) or strongly disagreed (12%) with this statement.

4.5 Theme 5: The resourcing of strategic digital plans

The fifth set of questions examined the board members' views on resourcing the strategic plans of their companies in the field of digitalization. The motivation for asking these questions arose after discussing the topic with several board professionals: as boards may also participate in making or approving investment and resourcing decisions, it is crucial that these decisions are aligned with strategic goals of the companies. Therefore, it is valuable to examine how boards see their companies' resources and their allocation in strategic purposes.

In general, the respondents seemed confident about their companies' resources and their allocation. However, there also a significant amount of uncertainty, especially when the respondents were asked about the sufficiency of their companies' resources in order to execute strategic projects. The results of the questions under the fifth theme are presented below in Figure 13.

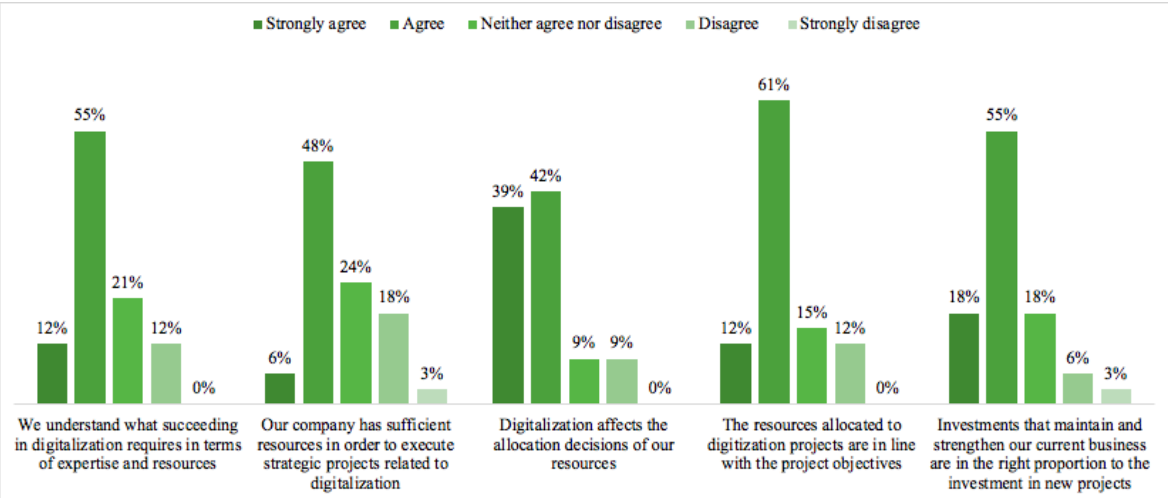

Figure 13. The respondents' view on resourcing the strategic digital plans

Statement 21: We understand what succeeding in digitalization requires in terms of expertise and resources

First of all, when asked if the board members understand what succeeding in digitalization requires in terms of expertise and resources, over half of the respondents (55%) agreed with the statement. 12% strongly agreed but the same number of respondents also disagreed with the statement. A significant number of respondents, 21%, neither agree nor disagree.

From those who strongly agreed that they understand what succeeding in digitalization requires in terms of expertise and resources, 3 out of 4 respondents had previously also said that their digitalization-related efforts are measured in concrete goals and results (in the fourth set of questions). Therefore, it is convincing that the individuals would also have a clear picture of what type of knowledge and capabilities are required in order to succeed in digitalization. However, as mentioned above, this was not the situation in every response. On the other hand, those respondents who answered that they may not understand what succeeding in digitalization requires in terms of expertise and resources were now consistent with their earlier responses: these respondents also did not agree when asked whether their companies measure digitalization-related opportunities with concrete goals and results.

Statement 22: Our company has sufficient resources in order to execute strategic projects related to digitalization

The second question of this set examined how the respondents felt about the sufficiency of their companies' resources in order to execute strategic projects. As mentioned earlier, there was clearly more uncertainty in the responses, compared to other questions in this survey in general, as 24% neither agreed nor disagreed and 18% of the respondents disagreed. However, there was still a majority who either agreed (48%) or strongly agreed (6%) that their company has sufficient resources in order to execute strategic projects related to digitalization.

Those respondents who either disagreed or strongly disagreed that their company has sufficient resources in order to execute digitalization-related projects did not have clear mutual characteristics, such as industry or company size. Also, their responses to previous questions differed. The same applied to those who agreed or strongly agreed that their company has sufficient resources in order to execute strategic digitalization-related projects.

Statement 23: Digitalization affects the allocation decisions of our resources

As some of the earlier have indicated, digitalization does play an important role in companies' strategies which can be seen also when the respondents were asked if digitalization affects the allocation of resources. A total of 81% of the respondents either strongly agreed (39%) or agreed (42%) that digitalization affects their resource allocation decisions and only 9% disagreed with the statement. The same number of respondents (9%) neither agree nor disagree.

Those few respondents who disagreed that digitalization affects the allocation decisions of their resources, also answered earlier that their companies do not have digital strategies. Therefore, their responses in this question were consistent with their earlier responses. On the other hand, almost all of those who strongly agreed that digitalization affects their resource allocation, answered earlier that digitalization is reflected in their strategy and all of them either agreed or strongly agreed that they know how to benefit from the opportunities of digitalization in order to create value and increase productivity. In light of these answers, it is logical that the same individuals now acknowledge that digitalization affects their resource allocation.

Statement 24: The resources allocated to digitization projects are in line with the project objectives

The fourth question in this set aimed at examining whether or not the resources are seen sufficient or aligned with the actual project goals: it is one thing to allocate resources for projects, but companies should also ensure that these resources, such as the number of skilled employees, are enough. Again, the respondents seemed relatively confident about this matter as 73% of the respondents either agreed (61%) or strongly agreed (12%) that the resources allocated to their digitization projects are in line with the project objectives. 15% neither agree nor disagree and 12% disagreed with the statement. As there were very little mutual factors, if any, between the respondents who disagreed that the resources allocated to digitization projects are in line with the project objectives, it is hard to draw any evidence-based conclusions about which factors could affect the board members views on this matter. However, one possible reason for the individuals' disagreement on correct resource allocation is that – as these respondents earlier answered that digitalization – they saw their companies' investments in digitalization insufficient.

Statement 25: Investments that maintain and strengthen our current business are in the right proportion to the investment in new projects

Finally, the last question about the resources aimed at examining the balance between resource allocations on existing business and new business. The motivation to ask this question is that there is a theoretical risk that when a company starts to strongly focus on the future and invest in new strategic projects, they might dismiss the old business and projects (and customers) which should still maintain the cash flow. According to the survey, 55% of the board members and chairmen agreed and 18% strongly agreed that the investments that maintain and strengthen their current business are in the right proportion to the investment in new projects. 18% neither agreed nor disagreed. 6% of the respondents disagreed and 3% (one respondent) strongly disagreed).

In order to understand the results in this question, it is relevant to also look what the respondents answered to the statement number 14, i.e. when they were asked whether their companies execute new strategic projects in addition to their core competencies. There were a few respondents who either disagreed or strongly disagreed that the investments that maintain and strengthen their company's current business are in the right proportion to the investment in new projects; on the other hand, 67% of the respondents either agreed or strongly agreed. All the respondents in the latter group also said that their companies do execute also new projects in addition to their core business operations. Therefore, these respondents were the only ones that were actually capable to answer this question and estimate the proportions of investments. What was not examined, is whether those who disagreed thought that the investments into new projects were too high or too low compared to resource allocations to the current business. In other words, these few respondents who disagreed with the statement could either think that their company should be investing either more or less to their new strategic projects.

4.6 Theme 6: The board’s role in managing digitalization

The sixth set of questions aimed at examining the respondents’ view on their role in managing digitalization. This set included four Likert scale questions and one close-ended question in which the respondents were required to choose the best alternative to describe their situation. The purpose of this set of questions was to explore what kind of roles boards have decided to take in managing digitalization (i.e. decision-making or measuring), is the role clear and if there is consensus or not regarding this role, and whether boards have changed their own practices due to the changes brought by digitalization. In general, there was quite a lot of dispersion in the results which are next discussed in more detail. The results of the questions under the sixth theme are presented below in Figure 14.

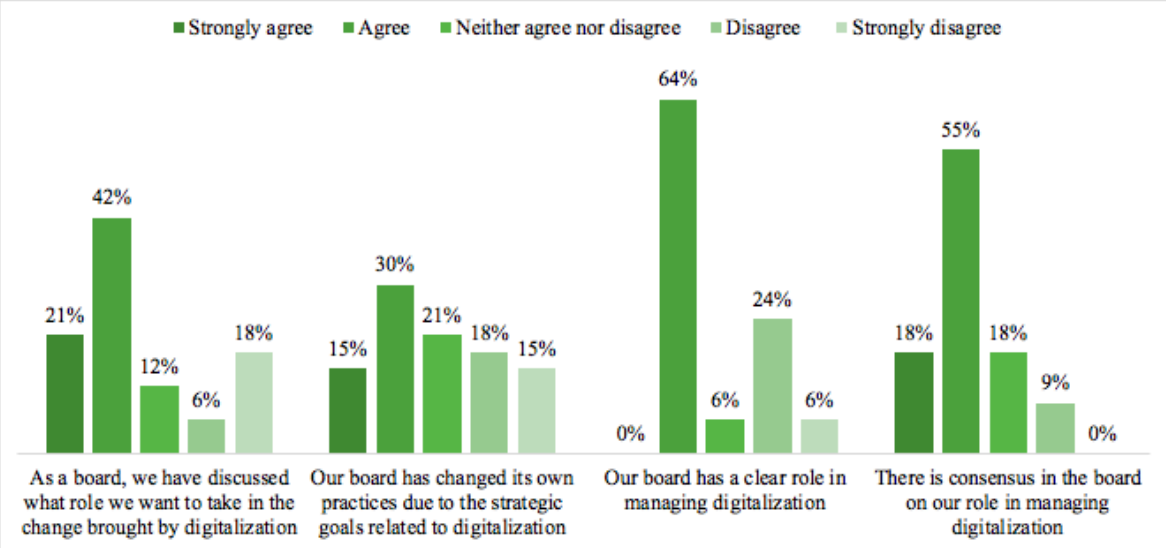

Figure 14. The respondents' view on their boards' roles in managing digitalization

Statement 26: We have discussed what role we want the board to take in the change brought by digitalization

The first question in this set aimed at examining whether or not the boards have discussed their own role in the change that digitalization brings. In order to have a clear role in managing digitalization and ability to, for example, measure boards' competencies in terms of fulfilling this role, boards should begin their journey by discussing and deciding what kind of role they want to take as a board. Compared to earlier questions, a relatively high number of respondents (18%) strongly disagreed or disagreed (6%) that they have discussed what role their board wants to take in the change brought by digitalization. However, the clear majority still either agreed (42%) or strongly agreed (21%) that this topic has been discussed by their board. 12% of the respondents neither agree nor disagree.

From those respondents who disagreed or strongly disagreed, almost everyone also disagreed earlier that their companies have created a digitalization strategy which execution is led by the board. In this sense, their answers were consistent and managing digitalization is not seen as a task of boards. These same respondents also answered that in their companies, a strategy is created by operative management and the board's role is to approve it, not create it. However, they also saw digitalization providing their companies with great growth opportunities. meaning that digitalization should be treated as an important issue also by the board. In contrast, there were almost as many respondents who strongly agreed that their board has discussed what role they want to take in the change brought by digitalization. The majority of these respondents also strongly agreed that digitalization is reflected in their strategy and that their companies have created digitalization strategies which are led by the boards. A clear majority of these companies also aimed at renewing their entire businesses through digitalization which indicates that digitalization is a strategic, not operative, matter in the first place.

Statement 27: Our board has changed its own practices due to the strategic goals related to digitalization

The second question regarded boards practices and whether boards have changed their own practices due to the strategic goals related to digitalization. This could mean, for example, changes in board meeting agendas or in the dialogue between the board and operative management. This question was one of the questions that gained the most dispersion in the whole survey as almost all of the alternatives gained a very similar amount of responses. The most frequent alternative was to agree with the statement as that alternative gained 30% of the responses. Besides that, 15% of the respondents strongly agreed that their board has changed its practices. The rest of the responses were generated quite evenly, as 15% of the respondents strongly disagreed and 18% disagreed with the statement, and 21% neither agree nor disagree.

What comes to those who strongly agreed that they have changed their practices as a board, the same respondents also agreed or strongly agreed that they have discussed about their board's role in managing digitalization. The same respondents also answered earlier that digitalization is reflected in their strategy and that their companies have created digital strategies which execution is led by the board. Furthermore, as will be revealed later in this set of questions, together with the previous question, this particular statement seemed to divide the respondents also in terms of what they described to be their actual role in managing digitalization.

Once again, it would have been interesting to learn the reasons behind these results in more depth. For example, even if the boards have not changed their practices – due to the change in strategic goals related to digitalization – it does not tell whether the respondents *wanted* to maintain their boards' old practices. The respondents could either see that the old practices still serve their board work well and fit into the company's situation, or they could just as well think that change was needed but not just started yet.

Statement 28: Our board has a clear role in managing digitalization

When asked about whether the boards had a clear role in managing digitalization, the majority of the respondents (64%) agreed that their board does have a specific role. Interestingly, none of the respondents strongly agreed with this statement, and instead, 30% of the respondents either disagreed (24%) or strongly disagreed (6%) that their board has a clear role in managing digitalization. 6% neither agree nor disagree. Those respondents, who had discussed their role in managing digitalization and who had also changed their practices as a board, were more likely to agree that their board has a clear role in managing digitalization. In contrast, the respondents who said their board does not have a clear role in this matter strongly disagreed also about discussing their role and about changing their practices as a board.

Statement 29: In our company, our board's role in managing digitalization is…

This close-ended question with three alternatives gave the respondents an opportunity to choose the best alternative to describe their board's role in managing digitalization. The alternatives (Figure 15) were taking digitalization forward by having a close dialogue with management; leading primarily by numbers and giving management the freedom to act within given frames; and monitoring the results based on certain indicators and then, if necessary, making decisions about starting or ending strategic projects.

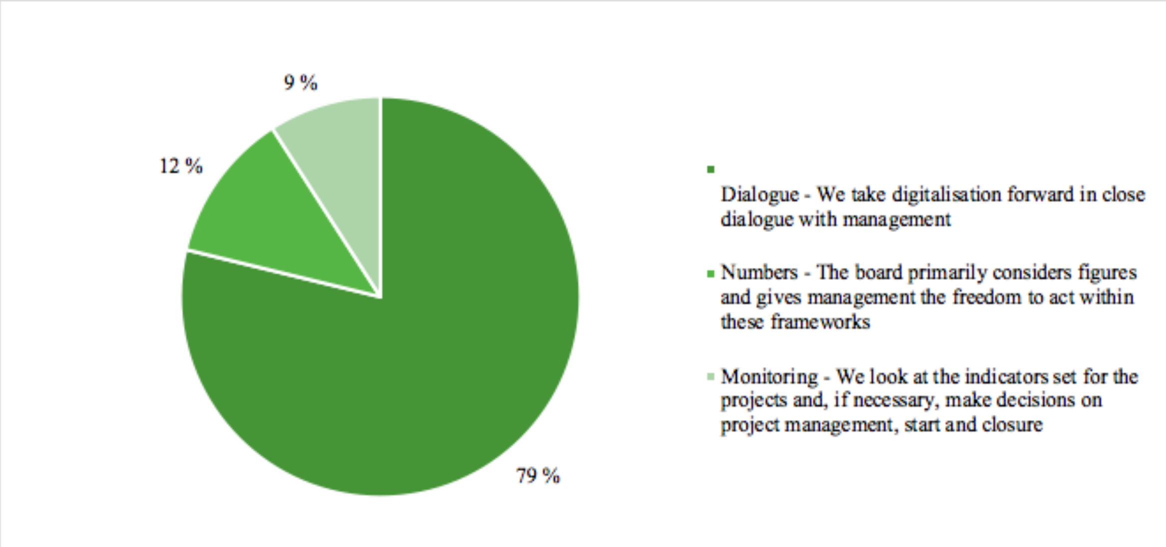

Figure 15. Boards' roles in managing digitalization

The clear majority (79%) of the board members and chairmen said their role in managing digitalization is to take digitalization forward in close dialogue with the management. 12% of the respondents said that their board primarily focuses on numbers and 9% have taken their role in monitoring the indicators that have been set to the ongoing projects. Interestingly, those respondents, whose board had discussed their role in managing digitalization and who also agreed that their board has a clear role in managing digitalization, all described their role to be in close dialogue with management. In contrast, the respondents who either chose their role to be in monitoring results or leading by numbers were more likely to not have discussed their role and also not changed their practices. Furthermore, these respondents whose role was not in dialogue, also either disagreed, strongly disagreed or had a neutral opinion when asked whether their board has a clear role in managing digitalization.

Statement 30: There is consensus in the board on our role in managing digitalization

Finally, the last question of this set aimed at finding out whether the boards have achieved consensus about their role in managing digitalization. In a sense, this question is tightly related to the first question of this set, as it examined whether the boards have discussed their role: in order to achieve consensus, there should be discussed first.

Therefore, it was interesting that while earlier 24% of the respondents disagreed or strongly disagreed that they have discussed their board's role, now only 9% disagreed with this statement. Instead, 73% of the board members and chairmen either agreed (55%) or strongly agreed (18%) that there is a consensus in their boards about their role in managing digitalization. 18% of the respondents neither agreed nor disagreed. Those respondents, who had discussed their role in managing digitalization and had also changed their practices as a board, seemed to have the greatest consensus about their role. These respondents saw their role in close discussion with management, while in contrast, those who had not discussed and not changed their practices, also had less consensus about their role.

4.7 Theme 7: The composition and competencies of the board

In order to have meaningful dialogue with the operative management about digitalization and to be able to contribute on strategy in the digital era, boards need to have relevant (and diverse) competencies, such as expertise and knowledge about the market, customers, competition and relevant technologies. As discussed in the theory part, these competencies can be considered when deciding the composition of the board. Therefore, the last set of questions focuses on the composition and competencies of the boards. The results of the questions under the seventh theme are presented below in Figure 16.

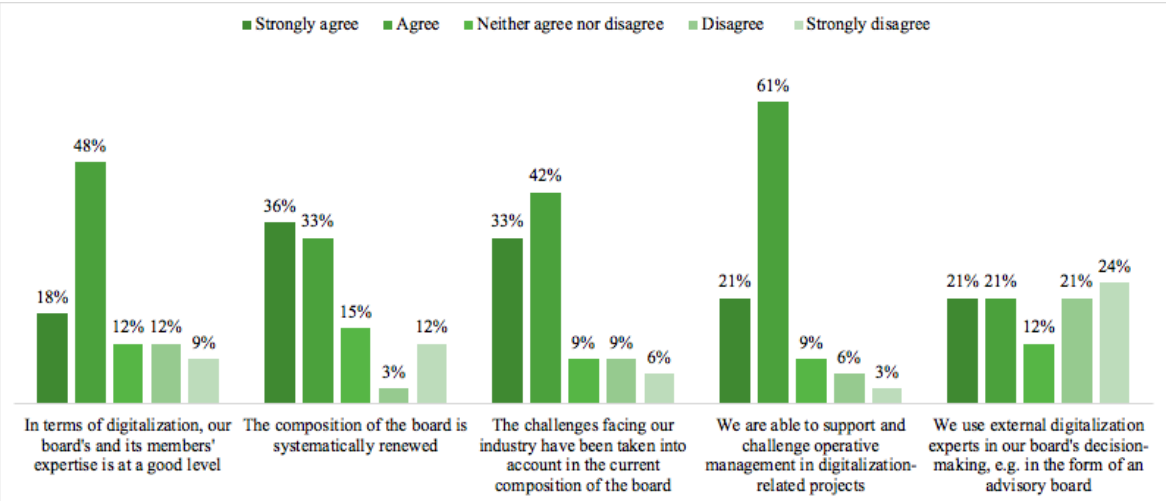

Figure 16. The respondents' view on board composition and competencies

Statement 31: In terms of digitalization, our board's and its members' expertise is at a good level.

When asked about the boards’ level of expertise regarding digitalization, the results were somewhat optimistic, as 66% of the respondents either agreed (48%) or strongly agreed (18%) that their boards’ expertise is at a good level. In contrast, only 21% of the board members and chairmen disagreed (12%) or strongly disagreed (9%), and 12% had a neutral response. In this case, it would have been beneficial to ask further, in which ways these boards measure their expertise. As the majority of respondents were confident about their boards’ skills and knowledge regarding digitalization, it is then suitable to expect that these boards have actually measured their expertise.

Those respondents who were the most confident about their boards' expertise in terms of digitalization, were remarkably less confident when they were asked whether they understand what succeeding in digitalization requires in terms of expertise and resources. Similar uncertainty was seen when they were asked if the opportunities created by digitalization have been defined with concrete goals. In contrast, the majority of these same respondents was confident that they know the possibilities and threats related to digitalization in their industry – however, the majority denied that their own companies' competitiveness was threatened by digitalization. Most of these respondents answered that their role in managing digitalization is to have a close dialogue with management as well as that in their companies, the board is the actor who does not create but approves strategy made by operative management. In order to succeed in this and to be able to have a meaningful discussion with the management, these boards should have great expertise in digitalization.

On the other hand, 21% of the respondents disagreed or strongly disagreed that their boards' expertise in digitalization is on a good level. The majority of them, however, chose dialogue as their role in managing digitalization but also leading by numbers and monitoring results were presented. Generally, these respondents who were the most uncertain about their boards' expertise also responded that they have not discussed their role in managing digitalization, that they do not have a clear role in it. Still, half of these respondents answered that digitalization is reflected in their strategy. What is probably even more interesting, is that half of these respondents answered that their own company's competitiveness is threatened by the digitalization of their industry. In a situation like that, boards should have enough expertise in order to contribute to a strategy that aims at maintaining the competitiveness of a company.

Statement 32: The composition of the board is systematically renewed

The purpose of this question was to examine, whether or not boards systematically renew the composition of the board, or in other words, make sure that the board has relevant expertise and fresh perspectives to support decision-making. As discussed in the theory section, while some degree of consistency is required in the strategy work of boards, they should still aim at systematic renewal. Furthermore, the decisions about selecting new board members should be rooted in the company's strategic business goals. As the competitive environment changes rapidly, the selection of the right people and expertise for the board is critical.

In this question, a relatively large number of respondents, a total of 36%, strongly agreed that the composition of their board is systematically renewed. Almost the same number of respondents (agreed with the statement, resulting in a total of 69% of respondents having a positive reaction to the statement. However, there were still 15% of respondents who either disagreed (3%) or strongly disagreed (12%), and 15% who had a neutral response. Approximately the same respondents who said that their board's expertise in digitalization is not on a good level now disagreed or strongly disagreed that their boards are renewed systematically. The majority of these respondents represented different-sized family-owned companies, although the latter factor does not seem to play an important role in this matter as also half of the respondents representing the opposite opinion came from family-owned companies from different industries. What does differentiate these two respondent groups is that the clear majority of those whose boards were systematically renewed, worked as chairmen, while the majority of those who disagreed in this matter, were board members.

Statement 33: The challenges facing our industry have been taken into account in the current composition of the board

As mentioned earlier, the decisions about selecting new board members should be rooted in the company's strategic business goals and the current situation at the time. Therefore, it was reasonable to ask whether or not the challenges facing the respondents' industries have been considered in the current board compositions. The results in this question were quite similar compared to the previous question, as 75% of the respondents either agreed (33%) or strongly agreed (42%) that their current board composition reflects the challenges of their industry. 9% of the respondents disagreed and 6% strongly disagreed with the statement.

Again, the majority of those who disagreed or strongly disagreed that the challenges facing their industry have been considered in the current board composition also disagreed or strongly disagreed that their boards are systematically renewed. At the same, the majority of these respondents answered that their companies' competitiveness is threatened by the digitalization of their industry and, on the other hand, that digitalization represents great growth opportunities for them. Therefore, it is interesting that these obvious changes – threats and future opportunities – in these companies' environment are not considered when choosing new board members. The majority of these respondents also disagreed that their boards had clear roles in managing digitalization and that they would have discussed their role in it.

Once again, no matter how alarming these results might look, they do not tell anything about the respondents' personal opinions on whether their boards should have acted differently. In other words, the respondents might have different opinions about how their boards should be composed, but they only report the current situation. Also, even if strong disagreement with this statement may indicate that the respondents see their boards lacking expertise, it does not mean that these respondents see this type of expertise any relevant. In other words, these respondents may either be dissatisfied with the board composition or they may just as well think that the composition of the board should not be even related to the company’s situation at the time. Again, further research in this matter could be beneficial.

Statement 34: We are able to support and challenge operative management in digitalization-related projects

The purpose of this question was to find out whether or not the board members and chairmen felt that their existing competencies are sufficient in order to provide them with ability to support and challenge operative management in digitalization-related matters. Previously, 79% of the respondents answered that their role in managing digitalization is to take digitalization forward through engaging in close dialogue with the management. In order to succeed in this and to be able to have meaningful dialogue, the board should have sufficient expertise and understanding of digitalization and its consequences to the industry.

It turned out that, once again, the board members and chairmen were very confident about their ability to support and challenge management in digitalization-related matters. A total of 82% of the respondents either agreed (61%) or strongly agreed with the statement and only 9% saw themselves incapable of supporting and challenging the management in digitalization-related projects. 9% of the respondents had a neutral reaction.

Those few respondents who disagreed or strongly disagreed that their board is able to support and challenge operative management in digitalization-related projects, also denied that their board has sufficient expertise in digitalization. In contrast, those who strongly believed in their capabilities in challenging the management, also answered that their expertise is on a good level. Respectively, those who were unable to challenge the management in digitalization-related matters, also said that their boards do not have a clear role in managing digitalization nor they have discussed their role. In contrast, those who were most confident about their ability to challenge management, also reported that they have a clear role in managing digitalization – in dialogue with management. Therefore, these individual respondents seemed to be consistent in their answers.

Statement 35: We use external digitalization experts in our board's decision-making, e.g. in the form of an advisory board

Finally, the very last question of the survey aimed at finding out whether or boards invoke external expertise to support their decision-making. This could mean, for example, including opinions and insights from occasional experts or more formal advisory boards in the decision making in issues that do not belong to the board members’ expertise. This kind of issues could regard i.e. certain technologies or markets.

The results in this question were exceptionally evenly distributed as pictured in Figure 16. When asked whether or not the boards use external digitalization experts in our board's decision-making, e.g. in the form of an advisory board, 21% of the respondents agreed and 21% strongly agreed. At the same time, 21% disagreed and 24% of the respondents strongly disagreed. 12% had a neutral attitude.

Interestingly, those respondents who strongly disagreed that their expertise in digitalization is on a good level, also strongly disagreed here as they were asked if their board uses external digitalization experts to support their board's decision-making. Among those who strongly disagreed on using external advisory in decision-making, there were also a few respondents who said that their expertise in digitalization is on a good level – which may be the reason for not using external expertise. However, some of the respondents who were confident about their boards' digitalization-related expertise, also strongly agreed that they do use external digitalization experts to support decision-making. In a sense, the fact that the board has certain knowledge and expertise, should not necessarily mean that the board could not ask for support for decision-making.

5 Discussion

Analyzing the results of the survey revealed interesting issues in the boards' approach to digitalization. The results also raised a lot of questions and, therefore, all of the seven themes of the survey could also be studied as independent topics as they revealed useful information about Finnish incumbent companies and their boards and the boards' approach to digitalization but, at the same time, they only scratched the surface of each topic. Furthermore, some of the questions may be seen as context-dependent meaning that there are no correct answers that would suit in every situation. However, it is good to remember that when this survey was conducted, ready and perfect answers were not expected but, instead, one of the goals of this survey was to give the board members and chairmen an opportunity to think about and reflect their work from different perspectives.

In this chapter, the results of the survey are first analyzed and reflected into the theory part. This analysis is by no means throughout, but it highlights the key concerns related to incumbents' board work and their approach to digitalization. The analysis is followed by a section that discusses the limitations of the thesis. Finally, the chapter makes suggestions for future research.

5.1 Analysis of the findings

While several studies have suggested that e.g. board performance and role in strategy work have been linked to companies' performance, the results in this survey suggest that the boards of Finnish incumbent companies still have a long journey to take – before they are able to become winning boards who lead their companies to success in the digital era. This analysis highlights some of the most interesting findings of the survey and reflects these findings to the literature that was previously reviewed in this thesis. In order to improve readability, the chapter is divided into seven sections that follow the structure of the survey.

The way that the company is attached to digitalization – future possibilities and objectives

According to the survey, Finnish incumbent companies have well realized the growth opportunities that digitalization represents, and they acknowledge the link between digitalization and value creation. However, as presented in the theory part, studies suggest that only a few executives have a holistic view of what digital really means and in which form it may take place in different businesses. Furthermore, three types of digitalization (process digitalization, communications digitalization and buyer digitalization) were introduced as areas that incumbents should focus on. As Crittenden et al. (2019) suggested, incumbents should pay attention to the company itself but also its channels and customers as a whole when digitalizing businesses. However, the survey results indicate that Finnish incumbents mainly focus on digitalizing their current business processes and not re-thinking their entire businesses. This was seen as 70% of the respondents strongly agreed that they are seeking to make their current business or part of it more efficient, but only 27% strongly agreed that they are aiming for the renewal of their entire business through digitalization.

While this ambition related to the desired impact of digitalization remains low among Finnish incumbents, their international competitors have much higher ambitions: as discussed earlier, Kane et al. (2015) studied 4,800 executives from 129 countries and they found out that almost 90% of the respondents said that their main objective related to digitalization is business transformation. Furthermore, Kane et al. (2015) argued that while less digitally mature incumbents focus on adopting individual technologies, more digitally mature companies aim at harnessing technologies to achieve strategic goals. Not only this highlights the possible digital immaturity of Finnish incumbents, but this also leads to another issue related to recognizing – or denying – competitive threats in the digital era.

Board's vision of the competitive situation of their industry

In my opinion, one of the most alarming findings in the survey was, indeed, the fact that only 18% strongly agreed and 21% agreed that their companies' competitiveness is threatened by the digitalization of their industries. Moreover, even a higher number of respondents disagreed or strongly disagreed with this statement. This indicates that the scope of the change in the business environment has not been widely understood among Finnish incumbents. As discussed earlier, the situation is way different internationally as only 8% of companies studied by Bughin et al. (2018) trusted their current business model to maintain economic viability if their industry keeps digitizing at its current course and speed. Studies suggest that digitalization changes companies' existing value-chains and business models radically when also the market profits become redistributed. Denying this inevitable development may be fatal for incumbents who are not ready to re-think their existing business models and value chains through digitalization.

As a solution, researchers suggest that in order to make long-term improvements in companies' ability to survive and develop, boards need to significantly change their perspective from evaluating the past to understanding the new competition. Furthermore, boards are now required to evaluate their companies' long-term health from new perspectives: not only from the traditional, financial perspective but also in the light of aspects that have not traditionally been on boards' agenda, such as companies' intellectual assets, capabilities, culture and customers. Moreover, as the rise of platform-based ecosystems enables digital players to operate easily across traditional industries, incumbents are facing new kind of cross-sector competition that needs to be recognized also by boards. According to Bughin et al. (2018), the emergence of digital ecosystems could account for more than 30 per cent of global corporate revenues by 2025. Thus, boards are required to adopt a much broader frame of reference in their strategic thinking than ever before. Therefore, it is soothing to find out that in this survey conducted among Finnish incumbents, most of the respondents identified two or even three possible sources of disruption and 67% of them recognized the emergence of new players in the intersection of different industries as a possible source of disruption. Recognizing possible threats and sources of new competition brought by digitalization is a key issue for incumbents whose boards are now required to include this kind of broader market orientation into their strategy work which is discussed next.

Strategy work in the company

As discussed in the theory part, one of the changes that researchers call for in boards' strategy work and decision-making is adopting data-driven decision-making culture. In a sense, this means moving from experience-based decision-making to embracing evidence-based decisions. This requires not only data and measuring but, above all, changing practices and the board's decision-making culture. While the majority of respondents in this survey agreed that they know what kind of strategic projects are executed in order to create value and develop competitiveness, one cannot unseen the lack of concreteness in the respondents' answers. When the board members were asked, for example, if they have set clear indicators and targets for the new strategic projects that are consistent with the company's strategy, only 27% strongly agreed. Respectively, when the board members were asked if the opportunities created by digitalization have been defined with concrete goals, only 18% of them strongly agreed. More interestingly, among those who reported a lack of clear indicators and goals, there were individuals who later answered that their board's role in managing digitalization is, specifically, in following numbers and monitoring project outcomes. Therefore, there seems to be a certain contradiction in what boards think they do (following numbers and monitoring results) and what they actually do (lacking concrete measurements and goals) and the findings highlight the need for adopting a new level of data-driven decision-making also by boards. As discussed earlier, in a study conducted by Chambers et al. (2013), one key characteristic of well-performing boards was that they used regular dashboards to track performance.

In the survey, the majority of respondents either disagreed or strongly disagreed that in their company, the board creates a strategy that is executed by operative management, and on the other hand, 81% agreed or strongly agreed that operative management draws up a strategy which is then approved by the board. The purpose of these questions was to examine the division of roles between board and management as well as how boards are involved in strategy-creation. The results indicate that, in Finnish incumbents, boards do not have a leading role in the creation of strategy. This is aligned with researchers' view as they argue that traditionally, boards tend to focus on the advising and evaluating, rather than on initiating strategy. However, researchers suggest that instead of traditional corporate governance, boards should adopt new forms of leadership and become able to take a longer-term view and efforts to provide strategic leadership. At the best level of involvement in strategy work, the board is involved continuously from the beginning in shaping the content, context and conduct of strategy.

Digitalization as a part of the strategy

As discussed earlier, digitalization should be aligned with the broader business strategy of a company, but companies should also create a digital strategy that is integrated to support other business objectives. According to Kane et al. (2015), the lack of digital strategy is the most significant barrier to digital transformation for incumbents. Moreover, having a clear digital strategy is what separates digital leaders from rest of the companies. However, only 21% of the respondents in this survey strongly agreed that their companies have created a digital strategy. At the same time, all of those respondents who said that their companies have not created a digital strategy, still agreed that they are seeking to make their current business more efficient through digitalization, and some of them even strongly agreed that are aiming at renewing their entire business through digitalization. Thus, there is evidence of a large contradiction between companies' digitalization-related objectives and digitalization as a part of these companies' strategy.

The resourcing of strategic digital plans

As discussed earlier, competing priorities are companies' main obstacles in the way of digital maturity. Also, studies suggest that one of the key elements of good corporate governance is finding the balance between the success factors that enable good performance today and the capability to compete and win in the future. This is what the survey aimed at examining as the respondents were asked, for example, if the investments to maintain current business are in the right proportion to the investment in new projects, as well as if digitalization affects the allocation decisions of the companies' resources. As the majority of the respondents indicated high expectations towards digitalization and its opportunities, it is soothing to see that the majority also reported digitalization to affect their resource allocation decisions. However, there was some dispersion in the answers to the question of balancing investments between existing and new business. In my opinion, this indicates that finding the right balance is a difficult question even for companies who are well aware of what succeeding in digitalization requires in terms of resources.

As discussed earlier, understanding the capabilities required for digital transformation is crucial and the discussions about required resources should include not only financial resources but leadership, organizational resources and technological competency. The two most critical components of strategy execution are culture and leadership. For this reason, the best-performing boards invest time and thought into managing the intellectual capabilities of a company, according to Kane et al. (2015). When the board members were asked whether their companies have sufficient resources in order to execute strategic projects related to digitalization, only 6% strongly agreed. Ultimately, this indicates a possibility that incumbents' strategic goals may not be achieved due to the lack of resources and capabilities. Therefore, in order to ensure long-term competitive advantage and achieving strategic goals, boards should take resource discussions into their agenda. Also, by discussing and outlining the financial, organizational and leadership capabilities and resources required to implement the strategy, the board and the CEO will end up with a mutual understanding of realistic and achievable plans.

The board’s role in managing digitalization

As discussed earlier, future boards need to adopt new forms of leadership instead of traditional corporate governance. As the survey results indicate, digitalization represents remarkable growth opportunities for most of the companies, which means that digitalization deserves a new kind of prioritization and focus also from boards. As Huse (2007) suggested, a board of directors may be the one organizational unit that has the greatest impact on companies’ performance and behaviour. This supports the idea that once a company has made the decision to renew their business and benefit from the opportunities provided by digitalization, boards have an important role in this transformation and change management. Moreover, Huse (2007) argues that especially chairmen are now required to develop new kind of leadership skills and lead by example in order to engage the management and board members to execute the strategic vision.

What comes to the board practices, boards are now required to challenge their conventional thinking and question their traditional practices in order to add more value and to make a greater contribution to the companies’ growth. However, evaluating boards’ “best” practices or creating universal practices is challenging because of the different contextual factors. The key thing is to objectively evaluate boards’ current practices and think whether those are the best ways to support the company in its efforts to achieve strategic goals. This may, for example, require re-thinking of the ways that the chairman, the board and the CEO communicate and change information. The transformation from IT-department-driven digitalization to a strategic digital transformation – that is driven by strategic business goals – may also re-thinking of who should be involved in the decision-making and which actors hold the most critical information in the company.

As one of the key responsibilities of boards is to ensure long-term stakeholder’s benefit in the decision-making, digitalization and IT governance should be seen as strategic, value-creating issues and something that concerns boards specifically. As was discussed in the section 2.3.2, IT governance has become increasingly important for companies in the digital era as it introduces new ways to evaluate companies’ performance and decisions in the light of value generation. Ultimately, IT governance examines technology investments and their alignment with a company’s strategy that aims at creating value for all stakeholders. Therefore, it is somewhat alarming that, according to the survey, only 21% of the respondents strongly agree that their board has discussed what role they want to take in the change brought by digitalization and none of the respondents strongly agreed that their board has a clear role in managing digitalization in the first place. If (or when) digitalization becomes critical for companies who try to maintain their competitiveness or renew their business, it becomes also vital for boards to think carefully, how they contribute to their companies' success in the new transformation.

The composition and competencies of the board

According to Kane et al. (2015), in order to direct their companies towards competitiveness in the digital era, business leaders should first ask themselves (e.g.) *is their organization* confident *in its leadership's digital fluency?* The employees of the digitally mature companies trust their leaders' skills and ability to contribute to digital strategy and that leaders possess an understanding of digital trends and technologies. When the board members in this survey were asked if their board's and its members' expertise regarding digitalization is at a good level, only 18% of the respondents strongly agreed, and only 21% strongly agreed that they are able to support and challenge operative management in digitalization-related projects.

New ways of thinking are required also when it comes to the composition of boards, creating new decision-making culture and deciding about agendas. Although companies' business environment changes constantly, only 36% of the respondents in the survey strongly agreed that the composition of their board is systematically renewed. Even fewer respondents (33%) strongly agreed that their industries' current challenges have been considered in the current composition of the board. As boards should be able to have meaningful discussions with management, contribute strongly to strategy, and support and challenge management, the boards then need to have knowledge, expertise and capabilities that are relevant in the current situation. As only this few boards reported their challenges to be reflected into board composition, it is no wonder that only 21% are confident that they are able to support and challenge operative management in digitalization. Ultimately, as discussed earlier, the composition of the board has to reflect the company's business environment, and the decisions about board members and succession plans need to be rooted in the company's business goals.

5.2 Limitations

In this thesis, there are certain limitations that are worth noticing. First of all, the main limitation of this thesis is the small sample size. Originally, the purpose was to collect a larger amount of responses, but due to time constraints, the sample size of 33 responses had to be accepted as a total amount. However, the positive thing with this sample is that it was pre-qualified and there is very little risk that the respondents do not actually represent the intended target group. The survey was addressed, using personal emails, to respondent candidates who the partners, Kasvuryhmä and Boardman, had qualified to be chairmen and board members of large and mid-sized companies.

Another limitation of this thesis is related to the question type and the results of using this particular question type. As the survey was conducted using mostly Likert scale questions, there is a typical problem related to Likert scale questions as they do not address the issue of "why" the respondent chose his/her answer. Therefore, in addition to using Likert scale questions, it would have been beneficial to use also qualitative, open-ended questions in order to better understand the reasons behind the answers.

5.3 Future research

As the survey was conducted as a relatively short quantitative survey, it gives a lot of opportunities for future research to dig deeper into the topics included in the survey. In a sense, all of the seven themes of the survey could offer interesting opportunities for closer examination. As was mentioned in the section concerning the limitations of this thesis, the selected type of questions also leaves room for further research: there were multiple interesting findings which raise the question "why" – why the respondents felt that way when answering the survey or why their boards have chosen to act the way they do. As this quantitative survey only enabled examining the current situation of Finnish boards in large and mid-sized companies as well as finding a limited amount of correlations between the results, some future research could be conducted in order to explain these results. As the purpose of the survey was only to study the current situation of boards in 2019 and to give the respondents an opportunity to think about their board work from different perspectives, one interesting option for future research would be to conduct the same survey among the same respondents again later – after a few years in between – in order to find out, whether something changes in their thinking and their board work.

Finally, as was also mentioned in the limitations section, the relatively small sample size does leave room for further research. When possible, the same seven themes could be examined using a much wider sample size. Moreover, an international comparison could be beneficial.

6 Conclusions

The purpose of this thesis was to examine the role and capabilities of the board of directors in managing digitalization in Finnish large and mid-sized incumbent companies and how boards could improve their contribution to the companies' successful digitalization. The thesis first examined boards' traditional role and contribution to companies' strategy and success and how best-performing boards, generally, support management and companies' success. Then, the thesis proceeded at examining, how digitalization challenges incumbent companies by re-shaping their stakeholder relationships and the rules of competition. Moreover, this part aims at explaining why digitalization of different industries creates such a remarkable threat to companies who do not engage themselves to this global phenomenon and do not make efforts to stay competitive. Thirdly, the thesis aimed at tying these two perspectives into theoretical suggestions on how boards should change their approach and practices in order to support their companies in the digital era.

The theoretical part built a foundation for the survey that examined, what digitalization represents for Finnish incumbents in terms of growth and challenges; how digitalization is positioned in the agenda of Finnish companies' boards; what is the role and contribution of the boards in managing digitalization; and do the boards have enough digital expertise and capabilities to manage digitalization and make strategic decisions related to it. Even though the sample size of the survey was small, many important issues and further questions were raised, and it is clear that each of the themes included in the survey could and should be studied more in the future.

The main contribution of this thesis was indicating that there is an urgent need for the discussion about the role of the board of directors in managing digitalization. As digitalization increasingly challenges incumbent companies, boards can no longer be excluded from this development. Instead, as several studies have suggested, boards need to take a more active role in companies strategy work as well as in leadership. Moreover, this thesis supported the findings of the Finnish Chamber of Commerce as they stated that, in 2017, only 28 per cent and two years later only 53 per cent of Finnish CEOs are satisfied with their board's current expertise regarding future challenges (Linnainmaa & Tuominen, 2017; Linnainmaa, 2019). It is inevitable that boards' composition needs a new level of attention in the digital era as the traditional rules of competition no longer apply and companies' business environment changes due to the rapid digitalization. The traditional role of boards in monitoring financial results simply does not serve the purpose anymore. Also, it seems that boards' visions about digitalization seem to lack concreteness, as the majority of the respondents in the study valued the opportunities related to digitalization but only a minority had turned these expectations into concrete goals that are systematically measured by concrete indicators and results.

The opportunities related to digitalization do not become realized by themselves. Those companies who want to remain competitive in the digital era and to succeed in their digital transformations, need and deserve boards that possess relevant expertise and understanding of the future challenges and the required resources; boards that are ready to question their old practices and committed to put time and effort in continuous strategy work as well as able to turn the digitalization-related opportunities into concrete, achievable goals. This thesis has successfully indicated that boards' role capabilities in managing digitalization in Finnish large and mid-sized companies requires a lot more attention and discussion in the future and suggested several concrete areas of improvement for start.

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